

Volume 23,
Issue 1

Spring 2024

Journal for Leadership and Instruction

ISSN 2475-6032 (Print)
ISSN 2475-6040 (Online)



**AN INTERNATIONAL PEER-REVIEWED
RESEARCH JOURNAL FOR
EDUCATIONAL PROFESSIONALS**

**A SCOPE Education Services
Research Publication**

Inside this issue:

- ◆ The Corequisite Student Experience and the Role of Faculty in their Academic Success
- ◆ No Aftermath: A Comparison of Pre- and Post-Pandemic Assessment Scores for Mathematics and English Language Arts in Grades 3 - 8
- ◆ Decolonizing Health Education with Anti-Racist Pedagogy: A Case Study in a Two-Year Community College
- ◆ Leveling the Playing Field: Covid-19's Impact on Interscholastic Athletic Participation in New York State Public Schools: An Ex Post Facto Analysis of District Demographics and Sport
- ◆ Gamification in Higher Education Instruction (HEI) and Student Outcomes
- ◆ Beyond the Field Experience: Restoring the Coastline: Featuring one man's efforts to rebuild a Living Shoreline in his community
- ◆ From the Field: FDR: Governor, President and Advocate for Youth
- ◆ Book Review: The Business Side of School Success: What Superintendents & Other School Leaders Need to Know

Practical Research for the Educational Community

Sponsored and published by SCOPE Education Services
in cooperation with Institutions of Higher Learning as a service
for school people to help with school planning and curriculum.

Contents

Page

- ♦ Editor's Perspective: 8
- by Editor-in-Chief, Richard Bernato, Ed.D.
- ♦ The Corequisite Student Experience and the Role of Faculty in their Academic Success 10
- by Sheryce Woolery-Balgobin, Ed.D.
- ♦ No Aftermath: A Comparison of Pre- and Post-Pandemic Assessment Scores for Mathematics and English Language Arts in Grades 3 - 8 15
- by Kenneth Forman, Ph.D., and Craig Markson, Ed.D.
- ♦ Decolonizing Health Education with Anti-Racist Pedagogy: A Case Study in a Two-Year Community College 19
- by Michael C. Liu, Ed.D., M.A., M.F.A., and Michael J. McGee, Ph.D., M.Ed., C.S.E.
- ♦ Leveling the Playing Field: Covid-19's Impact on Interscholastic Athletic Participation in New York State Public Schools: An Ex Post Facto Analysis of District Demographics and Sport 24
- by Justin T. Cobis, Ed.D.
- ♦ Gamification in Higher Education Instruction (HEI) and Student Outcomes 29
- by Harika Rao, Ed.D.
- ♦ Beyond the Field Experience: Restoring the Coastline: featuring one man's efforts to rebuild a Living Shoreline in his community, reprinted from Wake Forest Magazine, January 2024 issue 39
- by Kelly Greene, Managing Editor
- ♦ From the Field: FDR: Governor, President and Advocate for Youth 42
- by Edward J. Sullivan, Ed.D.
- ♦ Book Review: 47
The Business Side of School Success: What Superintendents and Other School Leaders Need to Know
- by Brian L. Benzel, Ph.D., Kenneth E. Hoover, Ph.D., & James Parla, Ed.D.
Reviewed by George L. Duffy, Executive Director, SCOPE Education Services



The Journal for Leadership and Instruction is recognized by AASA as a valuable resource to its members.



The Journal for Leadership and Instruction has been selected as the professional research journal for distribution to all NSDC member study councils.

National School Development Council

About NSDC

The National School Development Council (NSDC) was chartered in 1969 as a non-profit organization in the state of Massachusetts. The NSDC provides study councils and their executive directors with a national-level organization.

Guidance for Authors

Journal for Leadership and Instruction

ISSN Number (Print) ISSN 2475-6032
ISSN Number (Online) ISSN 2475-6040

Published by:

SCOPE Education Services
100 Lawrence Avenue
Smithtown, NY 11787

Mr. George L. Duffy, Executive Director/CEO & Coordinating Publisher

Telephone: 631-360-0800

Fax: 631-360-8489

Website: <https://www.scopeonline.us>

Editor-in-Chief:

Dr. Richard Bernato rbernato@scopeonline.us

Article Submissions:

The Journal for Leadership and Instruction is an international peer reviewed publication that is published twice each year. Authors should follow the APA Manual 7 guidelines. The review of related literature should be written in the past tense. No article will be accepted if it is more than 10 pages (double spaced) long. Suggested changes are the responsibility of the author. For the Fall issue, we ask that all submissions arrive by July 1, 2024.

How to Submit Articles:

To be considered for publication, all submissions should be double spaced, in 12 point characters and should be sent by email as a Word document to:

Publishing Staff:

Ms. Judy Coffey jacoffey@atmc.net

Ms. Christine Cosme ccosme@scopeonline.us 631-360-0800 x116

Reprints & Photocopying:

Copying requires the express permission of the Journal for Leadership and Instruction. For permission, write to Mr. George L. Duffy, Coordinating Publisher, Journal for Leadership and Instruction, SCOPE, 100 Lawrence Avenue, Smithtown, NY 11787, or fax requests to 631-360-8489.

About SCOPE:

SCOPE Education Services is a not-for-profit, private, voluntary organization permanently chartered by the New York State Board of Regents to provide services to school districts. Founded in 1964 by school superintendents, it is a cooperative venture for sharing resources to deal with common concerns. It is governed by a Board of Directors of school superintendents and college representatives and serves as a regional School Study Council and School Board Institute.

The Editorial Board of the Journal for Leadership and Instruction has identified the following thematic interests for the 2024 issues:

1. Leadership
2. Futures Trends
3. Learning Loss
4. Disengagement
5. Technology
6. Diversity

Other article topics will also receive full and professional consideration.

2023-2024 **SCOPE Board of Directors**

President:

Mr. Lars Clemensen
Superintendent, Hampton Bays UFSD

Vice President:

Dr. Lorna Lewis
Superintendent, Malverne UFSD

Treasurer:

Dr. Kenneth Bossert
Superintendent, Great Neck UFSD

Past President:

Dr. Joseph S. Famularo
Superintendent, Bellmore UFSD

Executive Director:

Mr. George L. Duffy

Board Members:

Dr. Anthony Annunziato
Associate Professor, Department of Instructional and Administrative Leadership,
St. John's University

Dr. Yiendhy Farrelly
Superintendent, West Babylon UFSD

Dr. Robert Feirsen
Coordinator, Educational Leadership Program, Education Department,
Manhattanville College

Mr. Michael Flynn
Chief Operating Officer, Western Suffolk BOCES

Dr. Roberta A. Gerold
Superintendent, Middle Country CSD

Ms. Jill Gierasch
Superintendent, Cold Spring Harbor CSD

Mr. Henry Grishman
Superintendent, Jericho UFSD

Dr. Timothy Hearney
Superintendent, Bayport-Blue Point UFSD

Dr. Ronald Masera
Superintendent, Center Moriches UFSD

Dr. Robert Moraghan
Director Emeritus, Stony Brook University

Dr. Dominick Palma
Superintendent, Merrick UFSD

SCOPE Officers:

Mr. George L. Duffy
Executive Director/CEO

Ms. Patricia M. Walsh
Deputy Director for Finance

Dr. John Stimmel
Deputy Director

Mr. Michael O'Brien
Deputy Director of Instructional
Services

Journal for Leadership and Instruction

Editor-in-Chief:

Dr. Richard Bernato, Adjunct Associate Professor, St. John's University; Administrative and Instructional Leadership (Ret.), President/High Involvement Consultants, Chief Creative Officer/Leadership Redefined, Inc.

Co-Editors:

Dr. Anthony Annunziato, Associate Professor, Administrative and Instructional Leadership, St. John's University

Dr. Roberta A. Gerold, Superintendent of Schools, Middle Country CSD

Dr. Robert J. Manley, Dean, Dowling College, School of Education (Ret.)

Dr. Ronald Masera, Superintendent of Schools, Center Moriches UFSD

Dr. Kevin N. McGuire, Professor, St. John's University, School of Education (Ret.)

Dr. Elsa-Sofia Morote, Professor of Public Management, John Jay College of Criminal Justice

Dr. Laura Seinfeld, Dean, College of Education, Information & Technology, L.I.U.

Dr. Warren Whitaker, Assistant Professor, Educational Leadership for Diverse Learning Communities, Molloy University

Editorial Assistant:

Dr. Amy Eckelmann, Editorial Assistant/Reference Editor, Molloy University

Associate Editors:

Dr. S. Marshall Perry, Ph.D., Vice Provost, Graduate Programs and Academic Innovation, Saint Mary's College of California.

Dr. Korynne Taylor-Dunlop, Coordinator & Professor of Ed.D. Program in Educational Leadership, Lynn University, FL (Ret.)

Coordinating Publisher:

Mr. George L. Duffy, Executive Director/CEO, **SCOPE Education Services**

Editorial Board:

Dr. Donald J. Beaudette, Associate Professor of the Practice (Ret.), Boston University

Dr. Arthur Bettencourt, Director Emeritus, New England School Development Council

Dr. Elfreda V. Blue, Vice Provost, Graduate and Undergraduate Studies, Hofstra University

Dr. David DeRuosi, Executive Director, New England School Development Council

Dr. Robert Feirsen, Coordinator, Educational Leadership Program, Education Department, Manhattanville College

Dr. Patrick Harrigan, Superintendent of Schools, Half Hollow Hills CSD

Dr. Lorna R. Lewis, Superintendent of Schools, Malverne UFSD

Dr. Tonie McDonald, Superintendent of Schools, Levittown UFSD (Ret.)

Dr. Robert Moraghan, Director Emeritus, Educational Leadership Programs, Stony Brook University

Mr. Michael O'Brien, Associate Director for Instructional Services, SCOPE

Dr. Eustace G. Thompson, Co-Chair, Educational and Policy Leadership, Ed.D. Program, Hofstra University

Dr. Edward J. Vinski, Associate Professor, St. Joseph's University

Dr. Maureen T. Walsh, Dean Emerita, School of Education and Human Services, Molloy University

Peer Review Committee:

Lydia Begley, Ed.D., Deputy Superintendent, Nassau BOCES (Ret.)
Kelly Ann Burlison, Ed.D., Associate Professor, Ross College of Education, Lynn University, Florida
M. Terry Cash, Ph.D., Educational Consultant/Program Evaluator, Cash Educational Consulting Services, LLC
Audrey Cohan, Ed.D., Senior Dean for Research & Scholarship, Division of Education, Molloy University
Thomas P. Dolan, Ed.D., Interim Superintendent of Schools, Sewanhaka CHSD
Maria G. Dove, Ed.D., Professor, School of Education and Human Services, Molloy University
Timothy T. Eagen, Ed.D., Superintendent of Schools, Kings Park CSD
Richard Faccio, Ed.D., Principal, Sewanhaka CHSD
Joseph S. Famularo, Ed.D., Superintendent of Schools, Bellmore UFSD
Sean C. Feeney, Ph.D., Asst. Superintendent for Curriculum, Instruction & Assessment, Port Washington UFSD
Patrick G. Harrigan, Ed.D., Superintendent of Schools, Half Hollow Hills CSD
Phyllis Harrington, Ed.D., Superintendent of Schools, Oceanside UFSD
Richard Hawkins, Ed.D., Director of Contract Programs, School of Education, St. Rose College, Albany, NY
Aurelia Henriquez, Ed.D., Superintendent of Schools, Port Chester-Rye UFSD
Michael J. Hynes, Ed.D., Superintendent of Schools, Port Washington UFSD
Albert Inserra, Ed.D., Dean, College of Education, Information and Technology, L.I.U. Post (Ret.)
Jonathan R. Klomp, Ed.D., Principal, North Babylon UFSD
Julie Davis Lutz, Ph.D., Chief Operating Officer, Eastern Suffolk BOCES (Ret.)
Craig C. Markson, Ed.D., Director, Educational Leadership Program, Stony Brook University
Barry McNamara, Ed.D., Adjunct Professor, St. John's University
Eric Moore, Ed.D., Assistant Principal, School District of Palm Beach County, Florida
Chrystyne Olivieri, DNP, FNP-BC, CDCES/Assistant Professor of Graduate Nursing, Sacred Heart University
S. Marshall Perry, Ph.D., Vice Provost, Graduate Programs & Academic Innovation, Saint Mary's College of California
Jessica Scher Lisa, Psy.D., Assistant Professor, Child Study Department, St. Joseph's University
Eric Shyman, Ed.D., Associate Professor of Child Study, St. Joseph's University
Selena Isles Smith, Ed.D., Adjunct Associate Professor, Admin. & Instructional Leadership, St. John's University
Jerome Vickers, Ed.D., Coach at Sports International

To order additional copies, or to subscribe to the JLI (Journal for Leadership and Instruction), contact Christine Cosme at 631-881-9660, or by email at: ccosme@scopeonline.us



The SCOPE Journal for Leadership and Instruction mourns the passing of Dr. Richard Swanby. Dr. Swanby served the Journal as its Editor-in-Chief from Fall 2012 to Spring 2016, as well as an Assistant Editor and Peer Review Committee Member. Under his leadership and with the diligent and dedicated assistance of the JLI Publishing Staff, the Journal gained ERIC status where its published articles can be accessed internationally.

He worked tirelessly to continue the Journal's commitment to scholarly research that could be applied to educational practice and leadership on all levels. In addition, he was a professor of Special Education for many years at Dowling College where he served his teaching candidates with personal attention and dedication to that college's mission.

We are in his debt.

He leaves his wife Dr. Eileen Rossman, three daughters, Nicole Koepenick, Megan Swanby and Anna Swanby-Laisne, and three grandchildren: Cobie, Tanner and Ella.

JLI Podcast Episodes

Episode Title (Episode #)	Speakers	Date Published
Greetings from JLI (001)	George Duffy, Robert Manley, Rich Bernato	9/13/2022
Students with Disabilities and Suspension Rates: A Cautionary Tale for School Districts (002)	Craig Markson, Kenneth Forman, Rich Bernato	9/21/2022
How Teachers Perceive their Principals' Effectiveness in Supporting Special Education Student Needs (003)	Rene Parmar, Rich Bernato	10/24/2022
How Special Education Can Promote Adaptive Leadership (004)	Nancy Morris, Rich Bernato	11/1/2022
Striving for an Inclusive Workplace (005)	John Coverdale, Rich Bernato	12/12/2022
Effectiveness of Policies and Procedures for Addressing Challenges and Threats to Transgender Youths (006)	Eustace Thompson, Jeff Harris, Rich Bernato	12/19/2022
Gamification Models of Practice in Higher Ed	Harilka Rao, Rich Bernato	3/6/2023
Please note that all podcast episodes below this line are linked to Spotify.		
Diversity, Inequity, and Exclusion: How SATs and Other Standardized Tests Reduce Diversity in Higher Education		10/2/2023



SCOPE Education Services

Visit SCOPE's website to register on-line
for Professional Development Inservice Courses...

www.scopeonline.us

For information, call 631-360-0800, ext. 129

SCOPE is an approved sponsor of Continuing Teacher and Leader Education (CTLE)



Use QR code to
view **JLI Podcasts**
on the SCOPE
website.

Editor's Perspective



Richardson said, "When it comes to the future, there are three kinds of people, those who let it happen, those who make it happen, and those who wonder what happened." The Editorial Board at JLI points its compass at 'making it happen.'

We do this by preserving our past principles and intents that we have emphasized across twenty-five years!

These efforts are complemented by how we honor our commitment to reconcile education's emerging trends with our preferred futures. This spring's issue represents a cross section of old needs that do not go away and new ones that challenge us on many fronts.

For example, Dr. Sheryce Woolery - Balgobin's article, "The Corequisite Student Experience and the Role of Faculty in their Academic Success," relates to our theme of relationships and developmental support to ensure student completion.

We can expect that article submissions like Drs. Ken Forman and Craig Markson's analysis of post-Covid achievement results will begin to grow. Their article, "No Aftermath, a Comparison of Pre- and Post-Pandemic Assessment Scores for Mathematics and English Language Arts in Grades 3-8" will provoke our thinking about themes of remediation and intervention strategies.

Drs. Liu and McGee, also provoke our thinking about themes that focus on matters of diversity, equity, and inclusion. They note training programs for anti-racist pedagogical strategies in higher education that appear to be encouraging in their article, "Decolonizing Health Education with Anti-Racist Pedagogy: A Case Study in a Two-Year Community College."

"Leveling the Playing Field: Covid 19's Impact on Interscholastic Athletic Participation in New York State Public Schools: An Ex Post Facto Analysis of Demographics and Sport," by Dr. Justin Cobis continues the themes noted by Forman and Markson, related to inequities magnified by the Covid 19 pandemic's impacts.

"Gamification in Higher Education Instruction (HEI) and Student Outcomes," by Dr. Harika Rao is an

example of innovative practices whose role in the instructional constellations must be acknowledged and nurtured, not only in higher education classrooms but across the K-12 curricula as well.

In a new category we are titling Beyond the Field Experience, and reflective of the Journal's commitment to new ideas and applications of innovative education practices, is represented by Kelly Green's article, "Restoring the Coastline" that highlights how extensive community involvement in futures-based environmental efforts can have a noteworthy impact.

Our traditional From the Field article this issue, again grounded to instructional issues, is Dr. Edward Sullivan's offering, "FDR: Governor, President and Advocate for Youth," which actively demonstrates how foresight, embedded in leadership, makes for successful programs for students.

SCOPE's own Executive Director, George L. Duffy always contributes to our efforts. In this edition he also offers his thoughts about the links between school finance and schools' sustained efforts to assure student success in his review of Drs. Brian Benzell, Kenneth Hoover, and James Parla's book, *The Business Side of School Success: What Superintendents and Other School Leaders Need to Know*. Its lessons highlight the needs to factor for the complexities of futures planning and resources' allocation effectively.

Continuing from the opening paragraph, the Editorial Board recognizes that these emerging trends we alluded to above demand our attention. The challenges these pose ask Kahane's question, "What does the future want of us?" (Kahane, 2012).

That leads us to new initiatives and sources we will provide. These continue with our regularly scheduled podcasts where we interview our published authors to probe their findings and applications. See the Journal's listings or our website that lists our podcasts. They are also now offered on Spotify.

Additionally, the Editorial Board has spent considerable time pinpointing the emerging futures before educators so that it can prioritize goals emphases for the 24-25 year. As a result, we will be informing you of additional efforts to highlight those whose long term results we believe will yield the most long-lasting impacts.

These include but are not limited to topics that intertwine and distill to broader themes and points whose exploration always warrant deep thought and conversation. Broadly speaking we collapse these to six categories: Leadership, Futures Trends, Learning Loss, Disengagement, Technology, and Diversity, Equity, and Inclusion.

For the coming year, we will announce two of these for particular emphasis in a Call for Papers.

Our outreach efforts to promote reader engagement and stakeholder participation under consideration will include:

1. An identified topic for emphasis for both the Fall 24 and the Spring 25 issues.
2. Specific Calls for Papers to emphasize each topic for each issue.
3. Invitations to Guest Editors to marshal and emphasize articles related to our priorities.
4. A series of panel discussions with recognized leaders in and expertise about these issues.
5. A users group who might want to contribute to specialized action research projects.
6. A webinar series to complement our advocacy.

What does the future ask of us?

Richard Bernato,
Editor-in-Chief
rbernato@scopeonline.us



Professional Development

SCOPE is an approved sponsor of Continuing Teacher and Leader Education (CTLE).

Professional Development Courses:

At SCOPE Education Services, we understand the unique challenges you face as an educator. We have developed courses (ranging from engaging students in emerging technologies to working with students who have disabilities) that will aid you in tackling these challenges.

To find out more about our current [Online courses](#) for educators, visit:

WWW.SCOPEONLINE.US

or contact:

Betty Westcott at 631-360-0800 x129
or email bwestcott@scopeonline.us



**SCOPE Education Services
100 Lawrence Avenue
Smithtown, New York 11787**

The Corequisite Student Experience and the Role of Faculty in their Academic Success

By Sheryce Woolery-Balgobin, Ed.D.

Abstract

Research shows that the previous challenges that influenced drop out for students assigned to developmental education have decreased due to the implementation of the corequisite model (Bailey et.al., 2013; Complete College America, 2012, 2021; Jaggars et al., 2015). With several changes in developmental education policies and practices over the years, the sustainability of the corequisite model is dependent on understanding how the model promotes academic success of students assigned to developmental education (DE). In this study, the academic success of developmental education (DE) students in corequisite courses were examined through the theoretical lens of Student Integration, (Tinto, 1993) and Student Involvement (Astin, 1999). Research reveals that the faculty approach to teaching DE students is one main factor which promotes academic success in corequisite courses. The findings from this study contribute to the expansion of the literature reviewed and have significant implications for DE policy and practice.

Introduction

Research over the years shows that a significant number of students enter community colleges under-prepared. Underprepared students refer to entering students who do not meet college level course requirements in English and Mathematics. These students are usually placed in developmental education (Moss & Yeaton, 2006). Traditionally, developmental education required underprepared students based on their placement scores to take and successfully complete one or a series of noncredit courses prior to enrolling in a college level course. Over the years, only a small percentage of under-prepared students completed their DE courses, and many did not persist to the second year (Bettinger et al., 2013; Fike & Fike, 2008; Moss & Yeaton, 2006; Schnee, 2014).

Consistent with research, a reflection on DE over the last 7 years as an Academic Advisor at a community college working with underprepared students, reveals that the number of students who enter community college underprepared has not decreased, however, the number of underprepared students who complete DE courses has increased and many of these students persist to their second

year. In conversations with students, there was a noticeable difference in how they described their experience in their assigned DE courses. As such, students spoke less about their challenges in passing the multiple sequence of DE courses and instead discussed the supports they now received in their corequisite courses.

A review of literature pointed to one compelling factor - a new policy which places underprepared students assigned to developmental education in the corequisite model. Unlike traditional developmental education practices, the corequisite model allows students to enroll in noncredit courses that are taught concurrently with credit courses (Barhoum, 2018). The success of the model indicates changes in pedagogical practices and classroom experiences which aligns with research which recommends that one of the seven characteristics of a successful corequisite model is that it must encourage effective pedagogy (Adams, 2020).

Related Literature

Research on the impact of the corequisite model indicates that the corequisite model promotes completion of DE courses. Several studies show improved pass rates for DE students through implementation of the corequisite model. For example, reports suggest that states such as Connecticut mandated PA1240, which doubled the rate at which developmental students passed a first-year composition, and in Tennessee the pass rates for students in co-requisite writing courses doubled within one academic year from 30.9% to 61.8% (Adams, 2020). Similarly, the success rates for developmental students increased from 37% to 68% percent in West Virginia; from 31% to 64% in Colorado; from 16% to 71% in Georgia; and an increase from 37% to 55% in Indiana (Complete College America, 2012).

There is reason to believe that students' academic success is influenced by their level of academic and social engagement, especially with faculty. This affirms both Astin's and Tinto's theory of student involvement and student integration and also highlights the role of faculty in DE students' experiences in corequisite courses (Astin, 1999; Tinto, 1993;

Karp et. al, 2008; Walker, 2015). Research conducted by Walker emphasizes the importance of support from faculty to DE students and an overall positive impact of corequisite courses on their pedagogy.

In addition, Tinto (1997) stipulates that the actions of faculty are framed by their pedagogical assumptions which shape the nature of classroom communities and influence the degree and manner of how students become involved in learning. Tinto views the classroom as central to student success and emphasizes that the classroom experience should be viewed not only in relation to student learning but also as it relates to student success. These observations reinforce the classroom experience and the role of faculty in that experience.

Purpose of the Study

The purpose of this study was to qualitatively explore developmental education (DE) students' experience in a corequisite model. As such, the following research question was addressed: what are the factors that facilitate the academic success of students taking developmental education corequisite courses? A review of the literature revealed a gap in literature on studies that qualitatively explored the experiences of DE students within the corequisite model. Research shows that most studies are quantitative in nature and focus on the success of the model which prompted reform efforts across the 50 states (Barhoum, 2018; Hodges et al., 2020). While the quantitative studies highlighted the number of pass rates, this qualitative study provided perspectives directly from students and faculty on how participation in the corequisite model promotes academic success.

Setting

The study was conducted at a non-residential, urban community college in New York State. Like many community colleges, the study site experienced the challenge of a large incoming population of students with DE course needs in reading, writing and mathematics, coupled with low pass rates of DE students.

Participants

Participants included a purposeful sample of eight students who completed a math or English corequisite course in fall 2021 and re-enrolled in spring 2022, as well as two faculty members who have taught DE courses for more than ten years. The study considered re-enrollment in a subsequent semester as a part of the definition of academic success.

Data Collection

To facilitate triangulation of the findings across multiple data sources, the study utilized qualitative data gathering techniques including: (i) individual interviews; (ii) a student focus group; and (iii) document review. A pre-study questionnaire was administered to gain demographic information

on students and faculty. This was administered through online Google Forms and provided information to the researcher on each participant that allowed for purposeful sampling.

Data Analysis

Based on the exploratory nature of the study, the researcher utilized an inductive method of analysis to manually analyze transcriptions from the audio-recordings of the interviews, focus group and documents. The researcher employed three rounds of coding. As a first cycle coding method, In Vivo coding was chosen in an effort to honor the voices of the participants. Additionally, descriptive codes were also used to provide a detailed inventory of the pre-study questionnaires and documents for review. Document review was conducted following eight steps suggested by O'Leary (2014): (i) gather relevant texts; (ii) develop an organization and management scheme; (iii) make copies of the originals for annotation; (iv) assess authenticity of documents; (v) explore document's agenda, biases; (vi) explore background information; (vii) ask questions about document; and (viii) explore content. This was followed by second and third cycle coding through use of pattern codes, where the first cycle In Vivo and descriptive codes were grouped into meaningful themes (Miles et al., 2014). This tied together different pieces of information from the triangulated data.

Findings

Analysis of student and faculty interviews as well as document review of the faculty participants syllabus and a university-wide guidance document on the implementation of the corequisite model, revealed that DE students' participation in corequisite courses lead to academic success through students' having a positive experience in their corequisite courses. This resulted in what participants described as a "domino effect" and a positive impact of the corequisite model on their continued learning experience in other courses.

The analysis revealed four factors that facilitated academic success: (i) faculty approach; (ii) students' time and effort; (iii) students' motivation and (iv) "a good support line." Of the four factors listed, one stood out in particular - faculty approach - and shows great promise towards the sustainability of the success in student outcome of under-prepared students.

Student's Motivation

The analysis revealed internal and external factors that motivated each student. Students talked about becoming a more successful person and adding value to themselves or their life. The majority of the students discussed how they turned those challenges they experienced into a motivator. In addition, students described external motivations including financial and family obligations, the need to have a degree, earn a higher salary, get a better

job, and to earn respect from others. Some students were motivated to complete their degree to be an example for their children.

Students' Time and Effort

The findings show that the students all put a lot of time and energy into preparing and completing work for their corequisite course. Their involvement was analyzed qualitatively and quantitatively. Qualitative involvement explains each student's dedication to learning in the corequisite course through actions such as: attending classes, being attentive in class, note taking and expressing their interest and role in the learning process.

Quantitatively, students discussed physical actions they took in order to understand what was being taught in class as well as complete their coursework and assignments. The students underscored the importance of following instructions and taking action or seeking help to complete their coursework. This also included completing work outside of the classroom including rereading the information they received in class, check Blackboard, watch YouTube videos, consciously set aside time for assignments, stay on top of assignments, and redo an assignment for better grade. The majority of the students emphasized the importance they saw in asking questions and building a relationship with their professor.

A good support Line

Support is a vital factor to student success; as such, students were asked what comes to mind when they think of the word support. The responses included tutoring, the school, their success coach, staff at the college, teachers, students, family, and friends. Support was especially important for students who were out of school for a long period. Other resources or services provided as described by the students include the library, the writing center, financial aid, and office hours with their professor.

The students describe and appreciate the use of several technological resources including the Blackboard platform that professors post information on as well as a Matlab virtual desktop application, Microsoft Teams, online videos that students are able to watch and learn more about what was discussed in class, loaner computers that the school provided. Among these resources, there was unanimous consensus on the support felt from their professor.

Faculty Approach

Faculty Approach reflects how each faculty approached teaching DE students. The two faculty participants believed that the corequisite model goes along with their methodology of teaching. In addition, the document review revealed that the corequisite model implemented at the study site is flexible and allows the faculty opportunities to align their work to their pedagogical style. For example, one of the faculty participants uses what is relevant to the environment

of his students while the other seeks to better understand the students and how her course content can align with their individual goals.

Both professors had a deep commitment to working with and helping students in developmental education to succeed. One professor reflected that the corequisite model encourages a new way of thinking about DE students. She noted "I do a very individual approach" which is tailored to match the goals of each student." She further explained "I think that one-on-one work with the students can't ever be replaced... it's really how the faculty member approaches their work with the student that makes the difference for the student." The findings also show that the approaches taken by faculty also contribute to students' decision to stay or leave the institution. For example, through support from his professor one student was able to make up the coursework he missed while being out of school due to vaccination requirements.

Another interesting result was that both professors align their definition of academic success in relation to how the course is taught. For example, one professor takes an individual approach by explaining mathematical concepts through real world examples such as the stock market, while the other valued providing individual feedback. Students attest to this approach as they shared their appreciation for how their professors broke down the course material to help them better understand. They also shared that individual feedback and the opportunity to redo an assignment helped them to understand the course fully. All the students expressed the importance of connecting with their professors and appreciated any outreach from faculty to assist with challenges they experienced. Overall, the data showed an emphasis on student-centered approaches to working with DE students in corequisite courses and improving their success outcomes.

Discussion

The success of the corequisite model points to approaches that met underprepared students at their need. Of the four factors that promoted academic success, the data shows that students' motivation, their time and effort as well as the support they received centered around their experiences with faculty within the corequisite classroom. With that, faculty are seen as one of the key components in the network of support for students in corequisite courses.

This discovery affirms existing research which suggests that faculty found teaching developmental education corequisite courses rewarding in terms of building relationship with students and providing individual feedback (Walker 2015). The two faculty participants in this research shared similar sentiments and both faculty participants saw the importance in learning and understanding students' goals and meeting students' needs. Based on the responses from the faculty as they discussed their teaching styles corroborated by the students, the research revealed that the teaching style of faculty has changed due to what is required within the policies of the corequisite model.

Document analysis corroborates this and shows the flexibility in the guidance document for the implementation of the corequisite model at the study site.

Furthermore, the research argues that corequisite courses provide a positive environment for students as faculty displayed cultural competence, which Ladson-Billings, (1998) notes encourages students to work to their full potential. As such, the classroom environment of both professors can be described as culturally equitable and rejects the deficit views of students (Ladson-Billings, 1998). This has positively benefited students and has led to the increase in pass rates of DE students as reported by many quantitative studies.

Additionally, the flexibility of the corequisite model allowed faculty to re-structure their course content to individual student's needs which aligns with Tinto's (1997) argument that various changes in curriculum and pedagogical programs can impact student outcomes. Findings from this research suggest that faculty were reflective of effective pedagogical practices for DE student success. Lastly, it is believed that corequisite courses provided faculty insight on the non-cognitive issues and affective needs that impact student learning and teaching which may alter faculty perspectives on developmental education reform, effective pedagogical strategies, and student ability (Walker, 2015). It is evident that the corequisite model at the study site altered faculty perspectives on teaching students assigned to DE.

Conclusion

All students have the ability to succeed under the right conditions, therefore it is the responsibility of educators to provide those conditions (Astin, 1999; Tinto, 1993). This statement underscores what many researchers have long recommended regarding the need to break deficit thinking concerning DE students and focus educational approaches toward supporting the student (Ladson-Billings, 1998; Mulvey, 2009). The corequisite model facilitates this support for DE students as it allowed faculty to focus on how they approached working with DE students. The data reveals that this factor played a major role in the students' experiences and their academic success in their corequisite courses.

In thinking about the challenges of traditional developmental education, research revealed that students were not necessarily failing courses but gave up before they got to a gate-way course (Adams 2020). This study concludes that under the new corequisite policy, changes in pedagogical practices shifted the classroom experience of students assigned to developmental education. As such, the corequisite model removed some of the challenges present in traditional developmental education courses that caused students to give up and provided an opportunity for students to take a college-level course alongside supplemental support, which facilitated effective teaching and learning in the corequisite classroom.

Implications for Policy and Practice

This study has provided practical evidence on how students have positively experienced corequisite courses through various supports largely based on the approaches used by faculty. In light of this research, it is recommended that if corequisite practices at the study site are to have a lasting impact, attention must be given to opportunities for engagement between students and faculty, and encouragement of effective pedagogical practices within corequisite courses. Additionally, the collective knowledge of DE students expressed in this study provides an opportunity for educators and policy makers to provide opportunities for student perspectives as a part of the conversation in DE policy and decision making.

References

- Adams, P. (2020). Giving hope to the American dream: Implementing a corequisite model of developmental writing. *Composition Studies*, 48(2), 19-34.
- Astin, A.W. (1999) Student involvement: A developmental theory for higher education. *Journal of College Student Development*, 40(5), 518-529.
- Bailey, T., Jaggars, S. S., & Scott-Clayton, J. (2013). Characterizing the effectiveness of developmental education: A response to recent criticism. *Journal of Developmental Education*, 36(3), 18-25.
- Barhoum, S. (2018). Increasing student success: Structural recommendations for community colleges. *Journal of Developmental Education*, 41(3), 18-25
- Bettinger, E. P., Boatman, A. & Long, B. T. (2013). Student supports: Developmental education and other academic programs. *The Future of Children* 23(1).
- Complete College America. (2012). Remediation: Higher education's bridge to nowhere. <http://completecollege.org/resources/>
- Complete College America. (2021). No room for doubt: Moving corequisite support from idea to imperative. https://completecollege.org/wp-content/uploads/2021/04/CCA_NoRoomForDoubt_CorequisiteSupport.pdf
- Fike, D.S., & Fike, R. (2008). Predictors of first-year student retention in the community college. *Community College Review*, 36(2), 68-88. <https://doi.org/10.1177/0091552108320222>
- Hodges, R., Miller Payne, E., McConnell, M., Lollar, J., Guckert, D.A., Ownen, S., Gonzales, C., Hoff, M.A., O'Donnell Lussier, K., Wu, N, and Shinn, H. (2020). Developmental education policy and reforms: A 50-state snapshot. *Journal of Developmental Education*, 44(1), 2-17.

Jaggars, S. S., Hodara, M., Cho, S., & Xu, D. (2015). Three accelerated developmental education programs: Features, student outcomes, and implications. *Community College Review*, 43(1), 3-26. <https://doi.org/10.1177/0091552114551752>

Karp, M. M., Hughes, K. L., O'Gara, L. (2008). An exploration of Tinto's integration framework for community college students. (CCRC Working Paper No. 12). New York: Columbia University, Teachers College, Community College Research Center.

Ladson-Billings, G. J. (1998). Just what is critical race theory and what's it doing in a nice field like education? *International Journal of Qualitative Studies in Education*, 11(1), 7-24.

Miles, M.B., Huberman, A.M., & Saldana, J. (2014). *Qualitative analysis: A sourcebook of new methods* (3rd ed.) Sage.

Moss, B. G., & Yeaton, W. H. (2006). Shaping policies related to developmental education: an elevation using the regression-discontinuity design. *Educational Evaluation and Policy Analysis* 28(3), 215-229.

O'Leary, Z. (2014). *The essential guide to doing your research project* (2nd ed.). Sage.

Schnee, E. (2014). "A foundation for something bigger": Community college students' experience of remediation in the context of a learning community. *Community College Review*, 42(3), 242-261. <https://doi.org/10.1177/0091552114527604>

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. 2nd Edition. University of Chicago.

Tinto, V. (1997). Classroom as communities. *The Journal of Higher Education*, 68(6), 599-623. DOI: 10.1080/00221546.1997.11779003

Walker, M. (2015). Exploring faculty perceptions of the impact of accelerated developmental education courses on their pedagogy: A multidisciplinary study. *Research and Teaching in Developmental Education*, 32(1), 16-38. <http://www.jstor.org/stable/44290283>

Sheryce Woolery-Balgobin, Ed.D., is a graduate of St. John's University and a Student Success Coach at Hostos Community College, with over ten years' experience in higher education providing support to students on their academic journey.

2023-2024 SCOPE Directories

- SCOPE *Directory of Suffolk County Public Schools*, including Educational Associations, Organizations and Unions serving Long Island \$25.00
 - SCOPE *Directory of Private and Parochial Schools* on Long Island \$15.00
 - SCOPE *Directory of Mid-Hudson Public Schools* \$20.00
 - Nassau County Public Schools** \$15.00

For information on ordering and discounts, call (631) 881-9660, or email ccosme@scopeonline.us, or download the order form at www.scopeonline.us/publications.

Note: Prices shown do not include 8.625% NYS sales tax or postage and handling.

No Aftermath: A Comparison of Pre- and Post-Pandemic Assessment Scores for Mathematics and English Language Arts in Grades 3 - 8

By Kenneth Forman, Ph.D., and Craig Markson, Ed.D.

Abstract

The purpose of this study was to compare pre-pandemic assessment results with post-pandemic assessment results for grades 3 - 8 in the areas of Mathematics and English Language Arts to determine the aftermath of the COVID-19 pandemic and remote learning. A series of independent sample t-tests were conducted in 99 school districts spanning two large adjacent counties located in the Eastern suburbs of New York City. Although the mean passing rates in the Mathematics and English Language Arts Assessments were slightly higher in the post-pandemic year of 2023 when compared with the pre-pandemic year of 2019, the results of the t-tests showed no statistically significant differences. These results supported the conclusion that this region of the country effectively utilized remote instruction and pandemic relief funding to reduce the impact of the COVID-19 pandemic on student achievement.

I. Purpose

Fundamentally, people, organizations, and their various systems change for two reasons: out of inspiration and out of desperation. Clearly, the COVID-19 pandemic was a desperate situation, requiring most school districts to shut down their face-to-face instruction for a period of time and introduce remote instruction. Remote instruction forced school districts to further embrace technology as a means to initiate virtual classrooms. Critics of remote instruction have argued that virtual learning was an inferior substitute for traditional face-to-face instruction. Furthermore, studies have found that virtual connectedness was not an adequate substitute for in-person connectedness and the face-to-face social isolation brought on by the pandemic. Social isolation had social, emotional, and academic consequences, particularly among elementary and middle school students (Islam & Islam, 2023; Miller & Schueler, 2022; Schneider, 2024).

Conversely, prior research by Forman and Markson (2021) found that technology could and should be leveraged to enhance student achievement, particularly in the New York State Mathematics and English Language Arts

Assessments for grades 3 - 8. As a result of these concerns and controversies stemming from the pandemic, the purpose of this study was to compare pre-pandemic assessment results with post-pandemic assessment results for grades 3 - 8 in the areas of Mathematics and English Language Arts to determine the aftermath of the COVID-19 pandemic and remote instruction.

II. Theoretical Framework

COVID-19, Learning Loss, Remote Instruction and District-Wide Strategies to Cope with the Pandemic

This investigation examined reading and mathematics achievement during the pre and post-pandemic periods to evaluate districts' efforts to support its student learning. It also reviewed studies that analyzed the impact of COVID-19 on student success.

Newsday reported the latest data on reading and mathematics achievement, which showed that about 50 percent of students tested statewide versus 58 percent in Nassau and Suffolk counties were proficient in math. In English Language Arts, the figures were about 48 percent and 53 percent, respectively. State education department officials who run the annual assessment program said scoring was more complex than usual because it involved switching to new academic guidelines known as Next Generation Learning Standards from the Common Core Standards. Academic progress was increasingly concerning as New York State boosted its financial investment in public education. Over the past three years, state lawmakers have approved record increases in aid, including more than \$1.6 billion for Island schools alone (Hildebrand, 2024).

Districts have struggled to implement widescale, academically intensive interventions post-pandemic to ameliorate students' academic performance as a result of the COVID-19 hiatus. Researchers from the National Center for Analysis of Longitudinal Data in Education examined a variety of interventions, including tutoring, small

group instruction, extended school days or years, and expanded summer school opportunities. The researchers focused on 12 districts in 10 states that together enrolled more than 600,000 students with a higher-than-average proportion of minority students and high-poverty schools. The data indicated that these types of programs reached about 20 percent to 30 percent of the targeted students, equal to about 5 percent to 10 percent of the total population of students. The researchers found that district leaders struggled to implement programs at the intended scale and intensity, especially with the many extraordinary challenges districts faced during the COVID-19 school years, such as continued COVID-19 surges and increased mental health needs of students and staff, so that academic growth was challenging (Carbonari et al., 2022).

Moreover, districts faced difficulties in student engagement, staffing, scheduling, and getting buy-in from parents and the community. The researchers also found that students generally fell behind academically. However, parents tended to think their own children were doing okay academically and that the problem was elsewhere. The researchers concluded that complete academic recovery and acceleration were urgent to ameliorate learning loss (Carbonari et al., 2022).

Another study by Kurtz et al. (2023) examined learning loss. School and district leaders were asked whether teachers in their schools or school systems increased or decreased their focus on small group work in order to help their students master material they should have learned during the pandemic but didn't. Sixty-four percent observed an increase, while 34 percent observed no change, and just 2 percent noted a decrease. Furthermore, seventy-four percent of administrators working in suburban communities saw an increase in teachers' emphasis on this approach compared to 69 percent in urban school systems and 56 percent in rural areas. The researchers found that respondents from rural communities were more likely than their peers in suburban or urban areas to report that use of group work had not changed compared to pre-pandemic levels. Forty-four percent of rural respondents but just 31 percent of urban and 22 percent of suburban leaders saw no changes in this practice.

Schwartz (2023) cited a study by Emily Oster, a professor of economics at Brown University, and School Hub Director, who concluded that students have made some progress toward academic recovery, but overall achievement hasn't yet reached pre-pandemic levels. The School Hub recently aggregated 2023 student-test-score results across grades 3-8 in math and reading for about half of all states. The results showed that most states have made up some ground in math, compared to the earlier school years. However, in reading, some states have made progress while others have regressed. Only a few states have recovered to pre-pandemic levels: Iowa and Mississippi in math and ELA, and South Carolina and Tennessee in ELA.

The latest data from the COVID-19 School Data Hub indicated that students have progressed toward academic recovery, but overall achievement hasn't reached pre-pandemic levels. The results further showed that most states have made up some ground in math, compared to the 2020-21 school year. However, the data for reading was less substantive. In reading, some states were making progress while others have regressed (Schwartz, 2023).

When comparing 2019 state assessments with 2021, Hudson et al. (2022) found a decline in scores on Mathematics and English Language Arts Assessments in California, for grades 5 - 8 across the board. There was one exception in this study, with grade 8 performing higher in 2021 when compared with 2019 on the English Language Arts assessment. In a similar study of Mathematics and English Language Arts Assessments for grades 5 - 8 in the State of Pennsylvania, Lipscomb et al. (2022) found a partial recovery on these assessments. However, the scores still were well below the 2019 pre-pandemic year, compared to 2022. The partial recovery was more significant in the area of English Language Arts.

Sahni et al. (2021) conducted a meta-analysis of the research literature of remote instruction during the pandemic. The researchers found improved outcomes in English Language Arts from online teaching but not in the areas of Mathematics for grades K - 12. In contrast, Golden et al. (2023) found achievement gaps across multiple subjects widened under remote instruction, specifically as it related to diverse students living in poverty and students with disabilities.

Students in Florida, where a school was in person during the pandemic, 97 percent of the 2021-22 school year, experienced the same five-point decline in fourth-grade math scores as in California, where students were only seven percent of the year. Reading scores showed similar results. The expectation was that the states with the longest school closures would fare far worse in student outcomes than those where schools were reopened for most of the school year, but that did not prove to be true (Bailey, 2023).

Islam, M. A., and Islam, M. R. (2023) revealed a substantial increase in children's use of social media platforms and screen time during the pandemic, with many students spending excessive amounts of time online. This finding supported the notion that academic achievement has been interrupted by the COVID-19 pandemic. Additionally, the study found that excessive social media and screen time usage was linked to adverse effects on child development in areas such as cognitive, physical, emotional, and social development. These results emphasized the necessity for parents, educators, and policymakers to address the issue of excessive screen time and promote alternative activities that promote healthy child development (Islam, M. A. & Islam, M. R., 2023).

III. Data Sources

The New York State Education Department {NYSED} Data site (2023) was the primary source of data in this study. The school districts selected for the analyses were from Nassau and Suffolk County, New York. These school districts were from two large adjacent counties located in the Eastern suburbs of New York City. A total of 99 school districts were included in this study, from the pre-pandemic year of 2019 and the post-pandemic year of 2023. Several school districts were excluded from this region for having fewer than 100 test-takers or for not being full K-12 school districts that included testing on the full range of grades from 3 - 8 in Mathematics and English Language Arts Assessments. The researchers purposefully chose a testing year immediately preceding the pandemic (2019) to compare with a year immediately following the pandemic (2023), as well as a range of assessments for grades that would have included a large block of students who went through either all or part of the pandemic. Doing this could determine if the pandemic and remote instruction caused "learning loss" (Schneider; 2024).

It should be noted that the New York State Mathematics and English Language Arts Assessments for grades 3 - 8 do evolve over time. For example, computerized testing was implemented in some school districts in 2023, as opposed to none in 2019. While the core content and learning objectives remained largely the same, the learning objectives differed slightly between the 2019 Common Core Standards and the 2023 Next Generation Learning Standards due to ongoing teaching and learning refinements. Additionally, the 2023 Mathematics and English Language Arts Assessments saw significant changes in cut scores and performance standards compared to 2019. Finally, the 2023 assessment included field-tested items, while the 2019 versions did not. This means the 2023 test may have included some new content not yet fully integrated into teaching and learning. The researchers examined the test objectives of the 2019 and 2023 Mathematics and English Language Arts Assessments, comparing the objectives and found both examinations had compatible objectives, with somewhat more complexity in 2023 testing (Amin, 2023, NYSED, 2017a, 2017b).

IV. Method

The grades 3 - 8 Mathematics and English Language Arts Assessments had four reporting levels. Level 1 was the lowest level, and this score was characterized as performing below grade-level expectations. A Level 2 score was described as only partially proficient but still below the grade-level standards. A Level 3 score was considered to meet grade-level standards, and Level 4 was described as exceeding grade-level standards (NYSED, 2024). Independent samples t-tests were performed comparing the percent of students who achieved Levels 3 and 4 scores on the grades 3 - 8 Mathematics and English Language Arts Assessments among the 2019 and 2023 reporting years for the contributing school districts in Nassau and Suffolk County, New York.

V. Results

Table 1 below shows the independent samples t-test comparing the pre-pandemic year of 2019 with the post-pandemic year of 2023 on the Mathematics Assessments. Although the mean passing rates on the Mathematics Assessments were slightly higher in the post pandemic year of 2023, the results of the t-test showed that there were no statistically significant differences between the pre and post pandemic year on the passing rates for the grades 3 - 8 Mathematics Assessments, $p > .05$.

Table 2 below shows the independent samples t-test comparing the English Language Arts Assessments from the pre-pandemic year of 2019 to the post-pandemic year of 2023. Although the mean passing rates on the English Language Arts Assessments were slightly higher in the post-pandemic year of 2023, the results of the t-test showed that there were no statistically significant differences between the pre and post-pandemic year on the passing rates for the grades 3 - 8 English Language Arts Assessments, $p > .05$.

VI. Conclusion

The results of this study suggested that this region of the country effectively utilized remote instruction as well as State and Federal pandemic relief funding. There was no "learning loss" as measured by the New York State

Mathematics and English Language Arts Assessments for grades 3 - 8 when comparing pre-and post-pandemic results. These findings were consistent with the findings of prior research by Forman and Markson (2021), that technology could and should be leveraged to enhance student achievement, particularly in the New York State Mathematics and English Language Arts Assessments for grades 3 - 8.

Table 1

Pre and Post Pandemic Differences on Mathematics Assessments (N₂₀₁₉ = 99, N₂₀₂₃ = 99)

	Year	N	M	SD	SEM	t	df	p
Math	2019	99	60.85	16.88	1.70	-0.919	196	0.359
	2023	99	63.11	17.76	1.78			

Table 2

Pre and Post-Pandemic Differences on ELA Assessments (N₂₀₁₉ = 99, N₂₀₂₃ = 99)

	Year	N	M	SD	SEM	t	df	p
ELA	2019	99	52.00	15.93	1.60	-0.99	196	0.323
	2023	99	55.52	31.52	3.17			

VII. Implications of the Research and Recommendations for Future Studies

While critics of "too much" technology, remote instruction, and excessive screentime have argued that there is no substitute for in-person instruction, there clearly was evidence supporting its usage during the pandemic in this region of the country. Perhaps those critics were what has been commonly referred to as "digital immigrants," and the pandemic students in grades 3 - 8 were "digital natives" who could appreciate a greater degree of instructional technologies to enhance their learning. Future research should be qualitative in nature to gain a better understanding of generational differences in technological aptitudes and appreciations.

The researchers would be remiss if they didn't recommend future studies to determine how the school districts in both Nassau and Suffolk County, New York, effectively utilized technology, remote instruction, and pandemic relief funding to reduce the pandemic's negative impacts on student achievement. The detrimental impact COVID-19 had on student success was noted throughout the research literature, and as a result, what occurred in the school districts in Nassau and Suffolk County, New York, was truly special.

References

Amin, R. (2023, March 23) What to know about the upcoming state tests for grades 3-8. *Chalkbeat*. <https://www.chalkbeat.org/newyork/2023/3/23/23654125/state-tests-new-york-reading-math-scores-pandemic-learning-loss/>

Bailey, J. (2023, January 4). Quarantines, not school closures, led to devastating losses in math and reading. *The 74 Million*. <https://www.the74million.org/article/quarantines-not-school-closures-led-to-devastating-losses-in-math-and-reading/>

Carbonari, M. V., Davison, M., DeArmond, M., Dewey, D., Dizon-Ross, E., Goldhaber, D., ... & Staiger, D. O. (2022, December). *The challenges of implementing academic COVID recovery interventions: Evidence from the road to recovery project*. (Working Paper No. 275-1222).

Golden, A. R., Srisarajivakul, E. N., Hasselle, A. J., Pfund, R. A., & Knox, J. (2023). What was a gap is now a chasm: Remote schooling, the digital divide, and educational inequities resulting from the COVID-19 pandemic. *Current Opinion in Psychology*, 52. doi: 10.1016/j.copsyc.2023.101632

Hildebrand, J. (2024, January 2). Education advocates fault student-test scores. *Newsday*. <https://www.newsday.com/long-island/education/long-island-test-scores-dpdndfwv>

Hudson, K. M., Tomkowicz, J. T., & Li, W. C. (2022, April 9). *Evaluating student performance amidst the COVID-19 pandemic using propensity score matching* [Conference presentation]. Annual Meeting of the National Council on Measurement in Education.

Islam, M. A., & Islam, M. R. (2023). Exploring the impact of COVID-19 on children's social media usage: A pragmatic analysis of excessive screen time and its effects on child

development. *Journal of Community Positive Practices*, 23(2), 69-84.

Kurtz, H., Lloyd, S., Harwin, A., Daniels, A., & Cheseldine, S. (2023). *Learning Recovery 2023: 10 Educator Insights in 10 Charts. Results of a National Survey*. EdWeek Research Center. <https://epe.brightspotcdn.com/82/0d/9045a5d84fe58483dfbfcbeb2604/10-2-23-learningrecoveryspotlight-sponsored.pdf>

Lipscomb, S., Chaplin, D., Vigil, A., & Matthias, H. (2022, January 9). Pennsylvania's 2022 student proficiency rates show signs of partial recovery. *Mathematica*. <https://www.mathematica.org/publications/pennsylvanias-2022-student-proficiency-rates-show-signs-of-partial-recovery>

Schneider, C. (2024, January 7) Long Island Education: The top issues for schools in the year ahead. *Newsday*. <https://www.newsday.com/long-island/education/long-island-education-issues-d795ixt4>

Markson, C., & Forman, K. (2021). Leveraging school district-wide achievement through the use of technology. *Journal for Leadership and Instruction*, 20(1), 27-32.

Miller, L. C., & Schueler, B. E. (2022). *Post-pandemic onset public school student-test-based performance in Virginia. COVID-19 impacts* (Research Brief Series No. 2). <https://education.virginia.edu/documents/post-pandemic-onset-public-school-student-test-based-performance-virginia>

New York State Education Department. (2017a). *English language arts standards*. <https://www.nysed.gov/curriculum-instruction/new-york-state-next-generation-english-language-arts-learning-standards>

New York State Education Department. (2017b). *Mathematics learning standards*. <https://www.nysed.gov/curriculum-instruction/new-york-state-next-generation-mathematics-learning-standards>

New York State Education Department. (2023). NYSED data site [Data set]. <https://data.nysed.gov/>

New York State Education Department. (2024). NYSED:IRS English Language Arts and Mathematics Assessment Results [Data set]. <https://www.p12.nysed.gov/irs/ela-math/>

Sahni, S. D., Polanin, J. R., Zhang, Q., Michaelson, L. E., Caverly, S., Polese, M. L., & Yang, J. (2021). A What Works Clearinghouse rapid evidence review of distance learning programs. *National Center for Education Statistics*. https://ies.ed.gov/ncee/wwc/Docs/ReferenceResources/Distance_Learning_RER_508c.pdf

Schwartz, S. (2023, October 4). What the latest student-test results reveal: 5 things to know. *Education Week*. <https://www.edweek.org/leadership/what-the-latest-student-test-results-reveal-5-things-to-know/2023/10>

Kenneth Forman, Ph.D., is the Associate Director of the Educational Leadership Program at Stony Brook University, in NY.

Craig Markson, Ed.D., is the Director of the Educational Leadership Program at Stony Brook University, in NY.

DECOLONIZING HEALTH EDUCATION WITH ANTI-RACIST PEDAGOGY: A CASE STUDY IN A TWO-YEAR COMMUNITY COLLEGE

by Michael C. Liu, Ed.D., M.A., M.F.A., and
Michael J. McGee, Ph.D., M.Ed., C.S.E.

ABSTRACT

In this study, we examined the impact of anti-racist pedagogy on three different courses of health education in a two-year urban community college. The research employed a case study method with convenience and purposeful sampling. The data collection process was triangulated with individual interviews, classroom observations, and content analysis. The faculty member being observed in this study is a cis-gender white male; the student populations in all three courses are predominantly people of color. The emerging themes from the data show that the incorporation of anti-racist pedagogy helps to create an inviting and engaging learning environment. While the transferability of the findings in this study may be limited by the bounded settings of the case, the study demonstrates the positive, long-term effect of a white faculty member's previous participation in an anti-racist pedagogy training workshop.

INTRODUCTION

In the summer of 2022, both authors participated in training program titled Anti-racist Pedagogy Seminar: Transforming Classroom, funded by the City University of New York's Black, Race and Ethnic Studies (CUNY BRES) Initiative. The authors brainstormed ideas about how they could utilize the training from the Anti-racist Pedagogy Seminar in a cross-disciplinary collaboration. This article is the result of that collaboration.

LITERATURE REVIEW

Anti-racism and Decolonization in the Classroom

Existing literature has shown us that, in curriculum development, using anti-racist values towards a common vision is essential for students, faculty, and administrators (Kishimoto, 2018). For educators, specifically, the anti-racist pedagogy not only offers an opportunity to deconstruct the Eurocentric system through which education is prepared and taught, but also serves to challenge the positivist assumptions that there is "an objective and universal truth" (Kishimoto, 2018, p. 541). To decolonize a deep-rooted outlook on what knowledge is and how education should be conducted in a society that has a long history of being dominated by white males, infusing anti-racism in syllabi helps

move toward that vision because it can support BIPOC engagement, validation, and sense of belonging in education" (Ahadi & Guerrero, 2020, para. 3). Furthermore, by incorporating an anti-racist approach to education, faculty is engaged in a critical reflection. Given such difficulties in conducting self-criticism, common practices include establishing an Equity, Diversity and Inclusion (EDI) mandate charged to human resources, or an EDI officer, or contracting consultants who prepare and conduct EDI trainings that have mostly been proven failures (Dobbin & Kalev, 2016). Nonetheless, it is crucial to recognize that "no one can unlearn racism in one (or two) courses, trainings, or workshops" and that "anti-racism is a lifelong journey and commitment which is a continuous endeavor" (St. Clair & Kishimoto, 2010, p. 22). This case study serves to provide empirical evidence of how anti-racist pedagogy can be conducted to decolonize a course where the faculty is a heterosexual white American male while the majority of students are people of color and immigrants from diverse backgrounds.

What to Teach vs. How to Teach

Considering the complex goals of implementing anti-racism in the curriculum, faculty are reminded to separate their course content from their teaching approach. If a teacher is to create a sense of belonging among students, they must consider how "the design, content, and tone of the course syllabus will either engage or disengage students" (Ahadi & Guerrero, 2020, para. 3).

In this case study, the authors designed the research to document, analyze, and reflect how a heterosexual white male teacher navigated through the process of incorporating anti-racism into the curriculum and implementing it in various health education courses. In addition to what to teach, how to teach is equally important.

RESEARCH METHOD

This study employed an intrinsic case study approach (Creswell & Poth, 2017) to focus on an issue or concern and then selects one bounded case to examine the research question of this study: how anti-racist pedagogy and arts integration affect health education. Following

a purposeful sampling procedure and a holistic analysis, the bounded system of this case-three health education courses conducted by the same instructor during spring 2023 in an urban community college-allowed the authors to triangulate the data from class observations, individual interviews, and curricular materials. The data collected at the earlier process of the study were coded and analyzed to refine the later process of data collection-for example, the transcription of the first individual interview helped the researchers to refine the interview protocol of the following interviews-which constituted the cycle of data collection until it was complete (Corbin & Strauss, 2014).

Data Collection

The data collected in this study include class observations and memos, transcripts from individual interviews, and curriculum materials such as syllabi, assignments, and chapters from the professor's self-authored textbook. The collection process was completed in spring 2023. In person in-class observations were conducted in two Human Sexuality and Society courses, one in Health Counseling, and one in Comprehensive Health Education. Notes and memos taken at the observations were used in the data analysis and helped to create the interview protocols. The invitation to participate in the research as an interviewee was sent via email to 60 students who were enrolled in the three courses mentioned above. Four students responded and were interviewed on Zoom. The interviews lasted from 30 to 45 minutes. The Zoom recordings were transcribed and anonymized by Professor Liu. Professor McGee reviewed the transcript for edits.

Table 1 - Basic Characteristics of Student Participants

	Age Group	Gender	Race and Ethnicity
Kerry	31-35	Female	Multiracial non-Hispanic
Raven	36-40	Female	Asian
Fanny	21-25	Female	Black or African
Jasmine	21-30	Female	Black or African

The pseudonymized demographics of the students who participated are illustrated in **Table 1**.

The course related documents obtained for analysis in this study include: three syllabi and three assignment rubrics for the courses, a revised chapter of a textbook, and a document outlining the group rules and working agreements between the instructor and students.

FINDINGS

Overall Classroom Atmosphere

One apparent theme that emerged from the in-class observations and student interviews was the overall pleasant experience of students in the courses. Such an atmosphere was made possible by a variety of factors

described in the data, which are synthesized into two subthemes.

Positive and Inviting Demeanor of the Instructor.

All student participants shared that the experience of taking McGee's courses was fun and amazing. All student participants expressed their practical goals to apply knowledge from the courses for their current or future careers, which illustrated a certain degree of high expectations of the learning experience. Fortunately, students were able to gain not only helpful information but also receive it in a pleasant environment. For example, Kerry described:

This was a very fun course. I love Professor McGee. He's awesome. I like the way he teaches. He makes everybody feel comfortable, especially with -- like we would touch on subjects that could be a little tricky, especially when we got into sexuality, as you might expect. You might expect people, especially young people, to be very immature, but he...I don't know. He teaches very well. So, it was a very good course.

More specifically, when it comes to meeting students' expectations, Raven provided a holistic assessment, saying:

I want to work in community health, so I think this course is going to help me. For instance, if I do peer advocacy, I could tell them that I may not have experience working as a peer advocate, but I did take this class, and health counseling deals with all of these things, like advocating for people with asthma, diabetes, and all those things. Like, you get to learn a lot of things. This class is overall amazing because, from my experience, it helped to develop myself personally, professionally, and academically.

Jasmine, the oldest student participating in the study, recalled:

The atmosphere of the course, to be honest, was amazing. This was my first in-person class. I started school prior to the pandemic, and I was scheduled for in-person classes. But then the pandemic came, and things had to be changed around. For me, it was a bit scary. I'm 40 years old, so being on campus, I was thinking, oh my god, maybe I'm too old to be here or be in the class with students who were maybe younger than I am. But when I entered the classroom, I realized that there were students who were my age or probably older than me. And prior to this class with Professor McGee, I had a previous online class with him last semester. So in-person made it more comfortable, and I enjoyed his course.

Personable Demeanor and Relatable Content

From in-class observations and students' feedback, it was notable that the instructor made the learning experience more engaging by sharing his personal

experience openly. "He did share a lot of his personal experience with us," Jasmine mentioned, "such as working at Planned Parenthood, you know, and how they serve low-income people and people of color." The instructor incorporated his family history when illustrating course topics, which left an impression. As Jasmine recalled:

Professor McGee shared with us personally about his family members having a drinking problem. You know, being alcoholic. So, when we did that particular topic, it was personal for him, but he personalized it in such a way that all the students could relate to that as well...with all the personal stuff that he's told us, like he was very transparent from the beginning. You know, he shared experiences about his wife. He shared experiences about his child, even his own personal experiences with growing up with alcoholics and so forth. So, he made me comfortable. He made me comfortable from the very beginning.

Teaching in a personable and relatable way also was a key element in students' learning in the health profession. The instructor described in class how his privilege gave him opportunities that people without that privilege don't get. That being white, male, middle class, and able-bodied meant that many things came more easily to him than it did for those without those characteristics. Such a relatable approach was not only observed in classrooms, where the professor shared personal stories, feelings, and emotions in front of the students. It was also incorporated into the revised textbook that he authored. In several chapters he introduced notable professionals who had made significant contributions to health and who were people of color.

This was done with the intention of helping the students to relate to the textbook content, and to recognize the possibilities for achievement in the field. In addition, while identifying health disparities for people of color and the social determinants of health, he added information about federal policies in the last century that were intended to help all, but that disproportionately privileged white people. These included the Federal Housing Administration's low-interest mortgage program in the 1930s that effectively shut out Black Americans by "redlining" neighborhoods where they lived as too "risky" for investment. Between 1938-1962, 98% of FHA-insured mortgages went to white borrowers. In addition, the GI Bill of 1944 gave veterans access to mortgages, business loans, and education stipends after WWII. But discrimination by local and state governments, and by private organizations and individuals in housing and education meant Black veterans could not benefit nearly as much as white veterans. Many did not even apply, knowing they would be rejected due to race. These policies reinforced stigma and increased stressors on Black Americans over decades, negatively impacting their health.

Feelings Seen and Heard in Class

Overall, students shared that they were encouraged to express themselves and were appreciated when they did

so. When asked if they feel included and welcome in the classrooms, the feedback was unanimously agreeable, with detailed recollection from each of the student interviewees. For example, Kerry vividly described:

Oh, yes. We all were [encouraged to share]. I never felt at any point in time that I couldn't say anything in his class. I did feel like I could share my own thoughts freely. I did to the point where I actually went over time in my presentation. I felt very encouraged to share what I knew, along with the information that I learned in the course.

Jasmine, while agreeing about the democratic atmosphere in the class meetings, pointed out how such a welcoming environment could help with the learning of sensitive subjects in health education. She shared:

Yes, I definitely was able to freely express myself. The professor listened when you were speaking. He did not interrupt you. He just pretty much let you have the floor. I mean, even if you were going on and on, he would, you know, find a very decent way to kind of cut it just a bit. But we did a lot of role-play activities in the class, which was phenomenal because it didn't just assist me in interacting with my classmates. It helped in terms of the subject that was being discussed. For example, we did a particular role play which was about contraceptives. I would say it's a sensitive topic to speak about and because of the diversity of the class, we had mostly students of color, you know. I felt first like, oh my gosh, is she going to be comfortable with having this discussion? But the class was so amazing that everyone felt comfortable having these discussions, and he also made the class comfortable, so no one really felt awkward.

Contrasting to how vividly the students shared their experience in McGee's classrooms, the interviewer noted that most students were not verbally participating during one class that was observed. The following description by Fanny offers an explanation:

He gave us the chance to talk. He doesn't say, 'No, no, don't.' He gives us the chance to speak and express ourselves. We really interact in the class. But I rarely interrupt, because when he talks, I'm listening to him trying to understand every single word, you know. I will give my ear to the professor to understand what he is trying to say, even if I'm looking at my computer, my ears understand him. You may feel like he's confronting you, but he's not trying to attack you, you know, just trying to help you understand something. And when you give your opinion about something, he can maybe change his mind and say, 'Oh, yeah, you're right on this point.' He really gives us the chance to express ourselves.

Impact of Race Related Content

Varied Impressions on Anti-racism. While the instructor intentionally incorporated race-related aspects in the

readings, slides, and lectures, the accounts provided by student interviewees showed that the pedagogy had positive impacts to different degrees. When asked to reflect on the details of Professor McGee's usage of race-related materials. All four students were able to recall their individual reactions to such pedagogy.

For Kerry, while the race-related materials didn't have "any major impact", it was affirmed that "any effort by Professor McGee to make it have anti-racist language was much appreciated." Furthermore, Kerry recounted how McGee, a white instructor who talked about race in the class where "all the students are people of color" encouraged her "to acknowledge where we're from in the same kind of detailed way." And, in Kerry's view, the anti-racist pedagogy McGee's embracing his positionality was seen as a brave thing for an instructor to implement, as she explained:

It's also very open on his end because he can actually become...not a target, but you know, due to racism being so prevalent nowadays. It can put him in a vulnerable position at any point in time just stating where he is, especially since he's saying he's white. So, I really appreciate it. I appreciate him putting himself on the spot for us like that. I just felt it was interconnected. It wasn't something he made as a spotlight; it was just there. Pieces of information were just woven into the course. That's the way I can describe it, like if there was something pertaining to race and stress. He would just bring it up. And then we just keep on going. It was just there, within the course.

The ubiquitous anti-racist experience is not solely Kerry's. Other students had to think hard to recall specific details, too. For example, as a Black American, Jasmine at first didn't think the class helped her understand about race, though the talks about race did leave a positive impact in her learning experience:

I was born in Kingston, Jamaica. I came to the United States when I was 13 years old and have lived here ever since. I wouldn't say that this particular class has helped me to understand about race. Let me just think for a moment. He did share a lot of his personal experience with us, such as working at Planned Parenthood, you know, and how they serve low-income people and people of color. He did talk about diversity. He made the point and talked about the diversity in the classroom, that it was a good thing.

On the other hand, talking about race made Raven, an older student of Asian descent, become aware of how health care professionals "should treat people the same way" despite the colors of their skin and that "we should not worry about what the person's skin color is and determining the person's race and the

treatment that they should get." Raven also recalled how her health education made her understand the reasons behind the health stereotypes due to racial differences. For example, she explained hypertension in communities of color:

If someone else has a different skin color, then they would be more likely to be affected, which I agree with, because hypertension affects darker-skinned people more. That is true because we live in a community where we have mixed diversity. And mostly different colors are affected because the environment is usually not clean. That's why most people get sick. Some people personally are not that clean, or hygienic, which makes them sicker. I believe white people are more active with their health, and they're more concerned. And most importantly, a lot of people are not educated enough about the diseases or the new disorders that are spreading.

Another Black student, Fanny, was an example of someone skeptical about the discussion of race acknowledging how those conversations helped her understand the intersectionality of race, gender, and sexuality:

At the beginning, I was like, why are we talking about race, you know? But after that, when he gave us the first chapter it was clear because he was trying to help us imagine other people. So, everybody should know about people in other countries' sexuality. So when he asked us where we came from, and those things, that was actually really good, because in my class there are many people with many diversities. So, we are very different...maybe people from India, maybe people from Africa, like me. People from here, and many people from another country. So that was really amazing. The first thing that he asked us to do was to introduce ourselves in the mixer activity. So that was very good, because you can introduce yourself, and you can get to know your classmates. He actually knows all our names. When he takes attendance, he said Fanny is here. He didn't call on me, but he said Fanny is here. That was really good. And he does that to everybody in the class.

Fanny also pointed out the significance of the course description, as she considered which course to take to enhance her capacity to work in the health care profession where diversity is reality:

First of all, I chose that class because you know, you cannot go to work in a hospital if you don't know how to act with people right? With different people. If you are black, or if you are white, or if you are, I don't know, but you need to know. You need to know different behaviors of people, and that's why I took that class because when I read the description, it was human sexuality and society. So, you have to

understand the human aspect. The human sexuality in society. Because we come from different societies and cultures. That was better for me because I come from another country, and we have our own society there. So, I was like, let me know more about the society here because I'm thinking about working here. I was like, yeah, it's better for me to take a course so I can know more about people here.

Implications for Practitioners and Researchers

Structured yet Individualized Assessments.

With different training, background, and experience, both authors embraced the opportunity to design, implement, evaluate, and share how anti-racist pedagogy affects health education. The result of this study, while limited by the bounded nature of the case and the small number of research participants, documented the overall positive feedback from students who benefited from the experience. Understanding the significance of anti-racism is a process over time, this case study demonstrated how cross-disciplinary efforts, be it academic fields (health education vs. ethnic and race studies) or theoretical frameworks can yield rewarding outcomes for students. Future practitioners may consider similar projects whereby different members of in the community can work in tandem to optimize the process and product of anti-racist pedagogy.

Preaching Outside of the Choir.

As mentioned earlier, both authors in this study were participants of the anti-racist pedagogy training program, which may or may not be available for individual instructors who are interested, not to mention for those who should but aren't convinced, motivated, or incentivized to partake such trainings. As qualitative and case-based research continues to be done, quantitative and/or longitudinal research on the outcomes of anti-racist pedagogy may help convince leadership in and out of the education system to allocate resources at all levels and across political divides to maximize the impacts and benefits of anti-racist pedagogy across academic disciplines.

Limitations

The case in this study is unique and therefore the findings that emerged from the data may not be readily applicable in a different environment. First, interview participants volunteered to be interviewed, and they may have had different experiences than those who chose not to participate. Next, both researchers of this

study had gone through the same Anti-racist Pedagogy Program which was a voluntary training opportunity that required a five-day commitment. Such a premise indicates the inclination of the researchers' intention to embrace, practice, and improve the use of anti-racism in their teaching and curriculum design. In addition, the professor who was observed in the three courses in this study had been teaching the same courses over many years. Finally, the student population in the school where this study was conducted is predominantly BIPOC whereas the majority of the faculty composition is White. Such a contrasting racial dynamic between the instructor and students provided a unique opportunity where anti-racism can be implemented and assessed. Readers should consider their institutional location when considering the transferability of this study.

References

- Ahadi, H. S., & Guerrero, L. A. (2020, November). *Decolonizing Your Syllabus, an Anti-Racist Guide for Your College*. <https://www.asccc.org/content/decolonizing-your-syllabus-anti-racist-guide-your-college>
- Corbin, J., & Strauss, A. (2014). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Sage publications.
- Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage.
- Dobbin, F., & Kalev, A. (2016, July 1). Why Diversity Programs Fail. *Harvard Business Review*. <https://hbr.org/2016/07/why-diversity-programs-fail>
- Kishimoto, K. (2018). Anti-racist pedagogy: From faculty's self-reflection to organizing within and beyond the classroom. *Race Ethnicity and Education*, 21(4), 540-554.
- St Clair, D., & Kishimoto, K. (2010). Decolonizing Teaching: A Cross-Curricular and Collaborative Model for Teaching about Race in the University. *Multicultural Education*, 18(1), 18-24.
- Michael C. Liu, Ed.D., M.F.A., M.A., is an Adjunct Assistant Professor in the Department of Ethnic and Race Studies at Borough of Manhattan Community College at City University of New York.
- Michael J. McGee, Ph.D., M.Ed., C.S.E., is an Associate Professor in the Health Studies Department at Borough of Manhattan Community College at City University of New York.

Leveling the Playing Field: Covid-19's Impact on Interscholastic Athletic Participation in New York State Public Schools: An Ex Post Facto Analysis of District Demographics and Sport

By Justin T. Cobis, Ed.D.

Abstract

This study explored the impact of the COVID-19 pandemic on interscholastic athletic participation rates in New York state public schools and their relationship to school districts' demographics, including percentage of non-White students, percentage of economically disadvantaged students, total enrollment, and graduation rates. The sample consisted of 218 public school districts located throughout New York state, with approximately 20 participant districts from each of the 11 New York State Public High School Athletic Association's governing sections. This ex post facto quantitative analysis relied on archived data from the New York State Public High School Athletic Association's annual participation survey and the New York State Education Department's enrollment data from the 2018-2019 and 2021-2022 school years. The data provided variables for path analysis that allowed the researcher to infer that the COVID-19 pandemic affected athletic participation across different demographics.

Introduction

Each year in New York state, tens of thousands of student-athletes participate in interscholastic athletics in over 700 school districts on over 15,000 public school teams, accounting for hundreds of millions of dollars spent on student-athletes. Little is known, however, about whether these resources are distributed equitably so they reach the students who need them the most. Previous research has linked the benefits of athletic participation to academic achievement and, more recently, self-esteem (Wretman, 2017).

In May of 2021, the New York State Board of Regents voted and approved a policy statement on diversity, equity, and inclusion in New York state schools. The Board of Regents stated they intended the policy to "encourage and support efforts at the State and local level to create within every school and ecosystem of success that is built upon a foundation of diversity, equity, inclusion, access, opportunity, innovation, confidence, trust, respect, caring

and relationship building. All students must feel that they are welcome, they belong and they are supported in every school." (Young, 2021, p.1)

Before the New York State Board of Regents approved its policy on diversity, equity, and inclusion, they developed a culturally responsive-sustaining education framework to support education stakeholders as they develop and implement policies designed to equitably educate all students and provide services to best promote positive student outcomes. This framework has four principles at its core: a welcoming and affirming environment, high expectations and rigorous instruction, inclusive curriculum and assessment, and ongoing professional development (New York State Education Department [NYSED], 2019).

Theoretical Framework

Khalifa's (2018) culturally responsive school leadership framework and Chrobot-Mason and Roberson's (2022) model of inclusive leadership served as this study's theoretical framework. Together, these theories offer a lens through which to examine how school leaders can self-reflect on leadership behaviors, develop culturally responsive teachers, promote culturally responsive and inclusive school environments, and engage students, parents, and indigenous contexts.

According to Khalifa's 2018 culturally responsive school leadership framework, in order for schools to promote a culturally responsive and inclusive school environment, leaders should use school data to discover disparities and track them in academic and disciplinary settings. In his 2007 study, Theoharis identified the analysis of school and student performance data as a leadership practice present in principals promoting social justice in the educational environment. Theoharris focused on the school leader as the unit of study and also highlighted elements of resistance faced by school leaders as they worked toward social justice.

Chrobot-Mason and Roberson (2022) listed three goals for inclusive leadership. They include: (a) creating a shared identity among group or organizational members so each feels a sense of belonging, (b) reducing status differences and ensuring that each individual is treated with respect and concern, and (c) encouraging and facilitating involvement and participation of all so that each member has input making decisions.

Related Literature

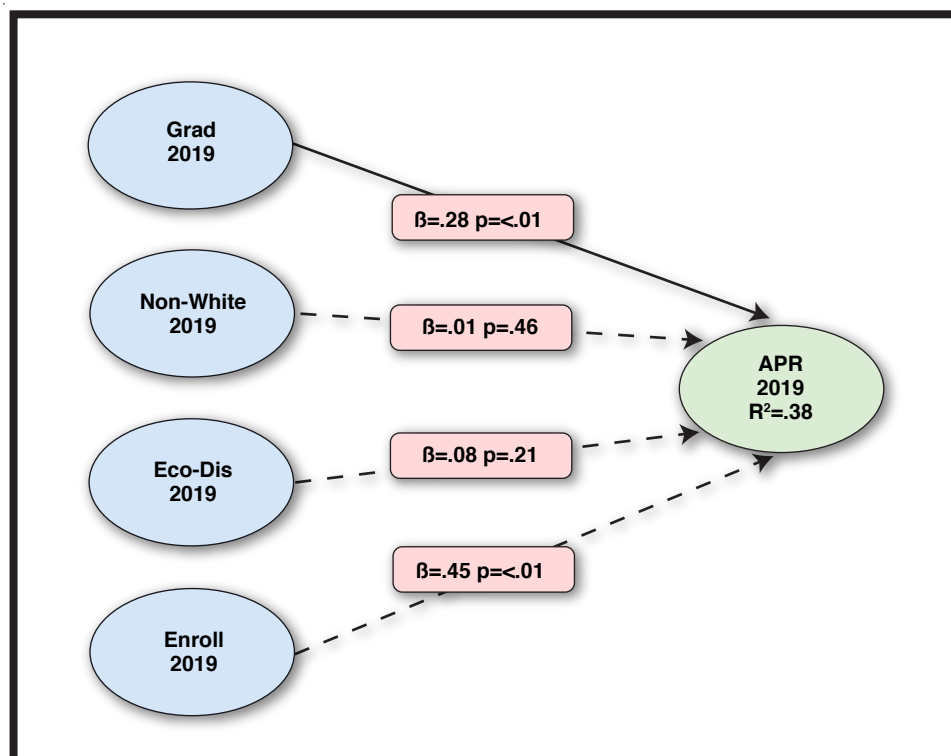
Much research has been done on the topic of interscholastic athletics and student participation. Sabo, Melnick and Vanfossen's study in 1993, Goldsmith's study in 2003, Miller, Melnick, Barnes, Farrell and Sabo's study in 2005, Shakib and Veliz's study in 2012, Kanters, Edwards, and Floyd's study 2013 and Higginbotham's in 2021 all explored the relationships between interscholastic athletic participation and student demographics, including race, socioeconomic status and gender. How did these studies find similar outcomes? Summarize the similar and dissimilar findings. This study aimed to build on such work, and to also measure the impact of the Covid-19 Pandemic from a New York State Public School lens.

Research Questions

The following research questions guided this study:

- RQ1. Is there a significant relationship between interscholastic athletic participation and a school district's graduation rate?
- RQ2. Is there a significant relationship between interscholastic athletic participation and a school district's racial composition (i.e., percentage of non-White students)?
- RQ3. Is there a significant relationship between interscholastic athletic participation and a school district's socioeconomic status (i.e., percentage of economically disadvantaged students)?
- RQ4. Is there a significant relationship between interscholastic athletic participation and a school district's size (i.e., total enrollment of students Grades 9-12)?

Figure 1 SEM Path Analysis of Athletic Participation Rate and District Demographics 2019



Note: SEM = structural equation models, APR = athletic participation rate.

Research Design and Data Analysis

The researcher conducted a path analysis utilizing a structural equation modeling approach to determine any statistically significant correlation among the independent variables (i.e., school district's graduation rate, percentage of non-White students, percentage of economically disadvantaged students, and total enrollment) and the outcome variable (i.e., school district's athletic participation rate). The researcher chose a structural equation model path analysis because it is used to measure the significance of relationships between independent and dependent variables regardless of linearity (Kock, 2016). The dependent or outcome variable was determined by measuring interscholastic athletic participation rates from the spring season during the 2018-2019 and 2021-2022 school years. For the purposes of this study, the researcher selected an alpha level of .05. This study consisted of a sample of 218 public school districts throughout New York state, excluding New York City. The researcher selected approximately 20 school districts from each of the 11 sections throughout New York state that fell under the governance

of the NYSPHSAA. All but five counties of the state, excluding New York City, were included in this sample, with at least three sample districts from each county. For the purposes of this study, the researcher focused on student-athletes who participated in spring sports, which included baseball, golf, lacrosse, softball, tennis, and track. The researcher gathered the archived data for this sampling from the NYSPHSAA and the NYSED websites.

Results

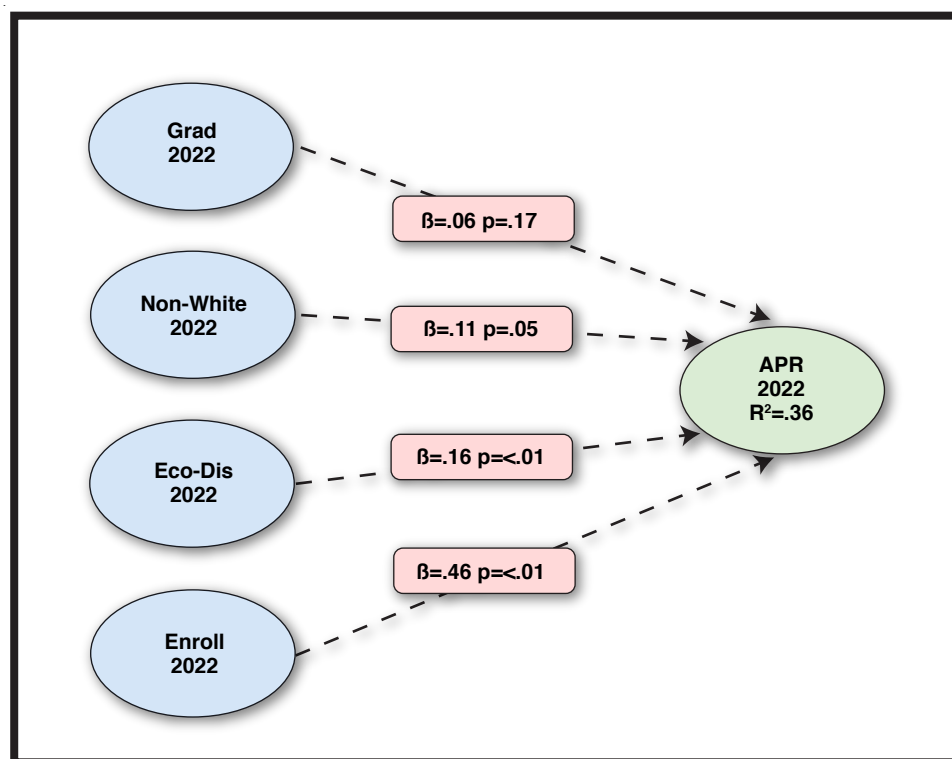
Results for the Path Analysis from 2018-2019 School Year which represent Pre-Covid are shown in **Figure 1**.

Results for the Path Analysis from 2018-2019 School Year which represent Post-Covid are shown in **Figure 2**.

School District Graduation Rate - Research Question 1

The first research question was: Is there a significant relationship between interscholastic athletic participation and a school district's graduation rate? During the 2018-2019 school year, a significant relationship existed

Figure 2 SEM Path Analysis of Athletic Participation Rate and District Demographics 2022



Note. SEM = structural equation models, APR = athletic participation rate.

between graduation rate and athletic participation rate ($\beta = 0.28, p < .01$). Following the COVID-19 pandemic, during the 2021-2022 school year, no significant relationship existed between a school district's graduation rate and athletic participation rate ($\beta = 0.06, p = .17$).

Although the mean graduation rate for both years was still 88% for the sample, several factors may have contributed to this change. During the pandemic and throughout the spring of 2022, the NYSED made revisions to graduation requirements and pathways to account for the impact of COVID-19 on the education of children throughout New York state (Rosa, 2021).

School District Racial Composition - Research Question 2

The second research question was: Is there a significant relationship between interscholastic athletic participation and a school district's racial composition (i.e., percentage of non-White students)? Prior to the pandemic, during the 2018-2019 school year, no significant correlation existed between a school district's racial composition and its athletic participation rate ($\beta = 0.01, p = .46$). In contrast, during the 2021-2022 school year, a significant correlation emerged between the same two variables ($\beta = -0.11, p = .05$). (This is speculation that the data does not verify).

Results indicated that districts with higher percentages of non-White students represented larger marginalized communities, which were hit harder by the COVID-19 pandemic. Further investigations into culturally responsive practices in place in districts with larger non-White student populations and other factors seem warranted. Either way, the results indicated a disparity between districts' athletic participation rate and race after Covid that cannot be ignored.

School District Socioeconomic Status - Research Question 3

The third research question was: Is there a significant relationship between interscholastic athletic participation and a school district's socioeconomic status (i.e., percentage of economically disadvantaged students)? The SEM path analysis from the 2018-2019 school year data showed no significant relationship between a school district's socioeconomic standing and its athletic participation rate ($\beta = -0.08, p = .12$). As was the case with racial composition, data showed a significant relationship in the 2021-2022 school year between a school district's socioeconomic status and its athletic participation rate ($\beta = 0.18, p < .01$).

After Covid, racial composition served as a significant indicator of school district athletic participation rate and so did school district socioeconomic status. Results indicated that school districts with larger percentages of economically disadvantaged students were significantly

impacted by the COVID-19 pandemic, and districts with fewer economically disadvantaged students were not.

Economic stress resulting from the COVID-19 pandemic may have exposed inequitable access to interscholastic athletics across New York state. Students and families that were placed under economic stress likely looked to their employment-aged student-athletes to contribute financially to households. Once again, school districts with larger marginalized populations, in this case economically disadvantaged students, were unable to sustain participation rates in a post-COVID-19 era when compared to districts with less socioeconomic need.

School District Size & Enrollment - Research Question 4

The fourth research question was: Is there a significant relationship between interscholastic athletic participation and a school district's size (i.e., total enrollment of students Grades 9-12)? Of all the research questions, only this one had an outcome with consistent statistical significance for both the 2018-2019 school year ($\beta = -0.45, p < .01$) and the 2021-2022 school year ($\beta = -0.46, p < .01$).

Of the four school district demographic variables included in this study, total enrollment most strongly correlated to athletic participation rate. One straightforward explanation for this strong relationship was that statistically, more opportunities exist to participate in sports with limited roster capacities at schools with lower enrollment numbers. In Grades 9-12, only so many roster spots exist for any given sport. In districts with lower enrollment, students have more opportunities to participate because the school has a smaller pool of students to draw from for team rosters. There are only nine starting spots on a baseball or softball team; likewise, only 10 players can be on the field at one time in lacrosse. Although some sports, including track and field, have fewer capacity limits, most sports have a limited number of roster positions available to students.

Additionally, schools with smaller enrollments may have a more tight-knit culture that promotes and encourages participation in extracurricular activities, including interscholastic athletics. As the only variable that was a significant indicator of interscholastic athletic participation both before and after the COVID-19 pandemic, the data showed a less significant impact on smaller communities that could be the subject of further investigation.

Conclusion

The researcher set out to examine the impact of COVID-19 on athletic participation rates in New York state public schools and if district demographics played a role in the severity of the pandemic's impact. The results of this study clearly showed the COVID-19 pandemic negatively affected school districts with more non-White and more

economically disadvantaged students than it did other school districts throughout the state. Although academic performance as measured by graduation rate was a significant indicator of athletic participation prior to COVID-19, it did not remain a significant factor after the COVID-19 pandemic. Instead, total Grade 9-12 enrollment served as the strongest and most consistent indicator of athletic participation in New York state public schools. Also of note was the R^2 value (i.e., goodness of fit) for both path analyses. For the 2018-2019 school year, the value of $R^2 = 0.38$ indicated that 38% of the proportion of variance for the model was explained. For the 2021-2022 school year, the value of $R^2 = 0.36$ indicated that 36% of the proportion of variance for the model was explained.

The results illustrate that the COVID-19 pandemic resulted in inequities in access to interscholastic athletics in New York state public schools according to subgroups. These inequities should be addressed at both the state and local levels by educational leaders and stakeholders to ensure an environment of equity and inclusivity for all students. The results of this study also provide data that allows for critical self-reflection among school districts throughout the state of New York. Educational leaders must take time to study how easily students can access extracurriculars, including interscholastic athletics, and the obstacles that hinder participation. By doing so, school leaders can work toward leveling the playing field for all students.

References

- Chrobot-Mason, D., & Roberson, Q. M. (2022). Inclusive leadership. In P.G. Northouse (Ed.), *Leadership: Theory and practice* (9th ed., pp. 322-351). SAGE.
- Goldsmith, P. A. (2003). Race Relations and Racial Patterns in School Sports Participation. *Sociology of Sport Journal*, 20, 147-171.
- Higginbotham, G. D. (2021). Can I belong in school and sports?: The intersectional value of athletic identity in high school and across the college transition. *Cultural Diversity and Ethnic Minority Psychology*, 27(4), 613-629.
- Kanters, M. A., Bocarro, J. N., Edwards, M. B., Casper, J. M., & Floyd, M. F. (2013). School sport participation under two school sport policies: Comparisons by race/ethnicity, gender, and socioeconomic status. *Annals of Behavioral Medicine*, 45, S113-S121.
- Khalifa, M. (2018). *Culturally responsive school leadership* (H. R. Milner, Ed.). Harvard Educational Publishing Group.
- Kock, N. (2016). Advantages of nonlinear over segmentation analyses in path models. *International Journal of e-Collaboration*, 12(4), 1-6.
- Miller, K. E., Melnick, M. J., Barnes, G. M., Farrell, M. P., & Sabo, D. (2005). Untangling the links among athletic involvement, gender, race and adolescent academic outcomes. *Sociology of Sport Journal*, 22, 178-193.
- New York State Education Department. (2019). *Culturally responsive-Sustaining education framework*. <https://www.nysed.gov/sites/default/files/programs/crs/culturally-responsive-sustaining-education-framework.pdf>
- Rosa, B. A. (2021, December 21). *Cancellation of the January 2022 administration of the New York State High School Regents Examination program in response to the ongoing impact of the COVID-19 pandemic*. New York State Education Department.
- Sabo, D., Melnick, M. J., & Vanfossen, B. E. (1993). High school athletic participation and postsecondary educational and occupational mobility: A focus on race and gender.
- Shakib, S., & Veliz, P. (2013). Race, sport and social support: A comparison between African American and White youths' perceptions of social support for sport participation. *International Review for the Sociology of Sport*, 48(3), 295-317.
- Theoharis, G. (2007). Social justice educational leaders and resistance: Toward a theory of social justice leadership. *Educational Administration Quarterly*, 43(2), 221-258.
- Wretman, C. J. (2017, July 21). School sports participation and academic achievement in middle and high school. *Journal of the Society for Social Work and Research*, 8(3), 399-420.
- Young, C. L. W., Jr. (2021, May 6). [Letter to The Honorable Members of the Board of Regents]. The State Education Department, The University of the State of New York. <https://www.regents.nysed.gov/sites/regents/files/521bra7.pdf>

Justin T. Cobis, Ed.D., is Superintendent of Schools / Principal in the Oysterponds Union Free School District in NY.

Gamification in Higher Education Instruction (HEI) and Student Outcomes

by Harika Rao, Ed.D.

Abstract

This article offers an introductory review of the use of gaming technology in higher education instruction (HEI) across multiple nations and its relationship to student engagement, retention and learning outcomes. Gaming instruction is defined in multiple ways that include boardgames, digital games, teaming processes and other interactive learning events that are shared experiences. In general, studies indicate that in a variety of nations, when gaming instruction is included in coursework, students seemed more engaged in learning, more likely to complete the course and more likely to continue their education.

Introduction to Gamification

Gamification is defined as the use of game-like design elements in non-game contexts such as education and business to achieve the desired behavior of the users by increasing their motivation and engagement. The term gamification remains controversial, and there has yet to be a final consensus on its definition. Some research studies define Gamification by underlining its relevance in the different contexts in which it is used, such as in finance, marketing, health, education, sustainability, and productivity (Allam et al., 2015; Fernandes et al., 2012; Muntean, 2011).

Gamification uses human principles of feelings, rewards, and accomplishments. Gamification is typically implemented using game design elements. Game design elements are points, badges, leaderboards, avatars, teammates, meaningful stories, and performance graphs, often seen in video games. In some cases, gamification is misunderstood as only badges and leaderboards.

A Brief History of Gamification

The history of Gamification dates to the 1900s, when the Boy Scout movement founded the badge system in 1908 (Cloke, 2019). Badges were awarded to recognize achievements in the Boy Scout groups. This incentive of badges encouraged students to work creatively to sell cookies. As

industrialization and technology disruptions changed, badges were adopted, refined, and implemented in newer formats.

The word Gamification was officially coined by Nick Pelling in 2002 while designing game-like user interfaces for commercial machines (Cloke, 2019). Pelling saw the great potential of Gamification for engaging players through the platform design. As more developers worked on motivation and engagement, different terms were named and defined, such as (1) game mechanics, (2) game elements, and (3) game theme. The definitions for game mechanics, game elements, and game theme are explained in **Figure 1**.

The growing popularity of Gamification

Gamification can be implemented in education, onboarding of employees, training in organizations, certifications, and businesses. As Gamification gains momentum, there is an increasing curiosity about its favorable impact on organizations, employees, and stakeholders. Gamification is one of the emerging research approaches used in the market research industry worldwide in 2019. During a survey of 1,088 respondents, including professionals at suppliers and clients in the market research industry, 25% of respondents were already implementing it, while 29% were considering it (Mazareanu, 2020). The value of the Gamification market worldwide is expected to grow from 4.91 billion U.S. dollars in 2016 to nearly 12 billion U.S. dollars in 2021 (Gough, 2017). To be effective, Gamification needs to be adapted to the contexts and target beneficiaries, with appropriate design game mechanics to enhance the motivation and engagement of the participants, be they students, faculty, and educators in higher educational institutions.

A Review of the Complexities, Choices, and Distractions and Limitations

While Gamification is a practical tool to increase user behavior and its impact on motivation, a few complexities need to be discussed. Those complexities of Gamification arise from defining and understanding the elements of Gamification and classifying them to suit the target audience. Gamification offers a greater scope for

Figure 1. Definitions of Game mechanics, Game elements, and Game theme

Game Mechanics	Game mechanics refer to the rules, systems, and interactions that govern how a game operates. These mechanics define the actions that players can take, the goals they must achieve, and the outcomes of their decisions.
	Game mechanics are the building blocks of gameplay and include elements such as movement, resource management, combat, puzzles, challenges, scoring systems and win conditions. They provide structure and functionality to a game, shaping the overall player experience (Sousa et al., 2021).
Game Elements	Game elements are the individual components that contribute to the overall design and experience of a game. These elements can include both tangible and intangible aspects, such as characters, environments, objects, obstacles, power-ups, sound effects, music, narrative elements, and user interfaces.
	Game elements serve various purposes, such as providing context for the gameplay, creating immersion, eliciting emotional responses, and enhancing player engagement. They are carefully crafted and integrated to contribute to the overall theme and mechanics of the game (Brighton, 2015).
Game Theme	The game theme refers to the overarching concept, setting, story, or aesthetic that gives a game its identity and coherence. It sets the tone and atmosphere of the game, shaping the visual design, narrative elements, and overall experience.
	The theme can range from fantasy worlds and historical settings to futuristic dystopias and abstract concepts. It provides context for the gameplay and guides the design of game elements and mechanics. A well-executed game theme creates a cohesive and immersive experience for players, enhancing their engagement and enjoyment of the game (Sousa et al., 2021).

user-engagement. One short coming is the scarceness of a universal framework to implement a gaming design. Most of the Gamification options in use seem to be based on customization and reward (Bui & Veit, 2015).

Gamification offers a variety of game-based elements, such as points, timers, badges, and leaderboards, to name a few. The game elements must match the intended game technique of motivation, socializing, learning, mastery, competition, achievement, or status for the

course or curriculum. Gamification elements may add noise to the focus of the user interaction causing more distraction than reinforcing motivation or achievement. Adding an objective for each game element and educating the user about the activity's intended purpose can reduce the inherent distractions in the game. Deploying Gamification through purposeful game elements is essential to reduce distractions. Clearly stated objectives can reduce users drift away from the purpose of the game and avoid a frivolous value being placed on the points, badges, times, and leaderboards.

An Overview of Research on Gamification Applications in Higher Education

A systematic literature review conducted on Gamification in Higher Education revealed that the results on the research conducted thus far were based on mixed and quantitative methodologies. The standard theoretical framework among the studies was Self Determination Theory, followed by Flow Theory that included designing various combinations of game elements in different contexts with rewards (points, grades, or leaderboard).

Previous Research Offers Cautions for the Application of Gamification

Gamification's impact on long-term retention is still being determined (Hamari & Koivisto, 2015). Once the students complete the gamification exercises, their motivation might wear over time. In addition, Gamification can lead to extrinsic motivation, where students are motivated by rewards rather than a genuine interest in the material (Przybylski et al., 2009). This could lead students to focus more on external incentives rather than the learning itself. It can overemphasize extrinsic motivation, such as rewards and badges, at the expense of intrinsic motivation that is driven by interest and enjoyment (Deci & Ryan, 1985).

Gamification can sometimes lead to an overreliance on extrinsic motivation, such as rewards and badges, which can undermine students' intrinsic motivation and ultimately reduce their engagement in the learning process (Ryan & Deci, 2000). While Gamification can enhance motivation and engagement, it can also have adverse effects, such as reducing intrinsic motivation and creating a sense of competition that can harm learning (Deci et al., 1999; Werbach & Hunter, 2012).

The effectiveness of Gamification may depend on the context in which it is implemented, such as the subject matter, student population, and learning environment (Kapp, 2012). This means that the success or failure of Gamification is situational. Gamification interventions can sometimes require more alignment with the intended learning objectives, resulting in a superficial engagement that does not translate into meaningful learning.

Another limitation of Gamification is that designing effective gamification interventions requires careful attention to the game mechanics, goals, and feedback systems, which can be challenging for instructors without experience in game design (Faiella & Ricciardi, 2015). Further, the gamification design needs to be tailored to the specific course objectives, context, and the learning styles of the students, which is very effort and time intensive.

Potential for unintended consequences

Gamification interventions can sometimes have unintended consequences, such as promoting a competition culture that undermines student collaboration and cooperation (Deterding et al., 2011). Gamification interventions can sometimes fail to account for cultural differences in how students approach learning, resulting in a lack of engagement and motivation among certain groups of students (Chang, 2019).

Challenges in implementing gamification in Higher Education

Implementing Gamification in universities can pose technical, administrative, financial, and behavioral challenges. However, these challenges can be overcome or at least mitigated largely by careful planning. The challenges are discussed below:

Technical Challenges

Infrastructure (Hardware): Relevant, robust, and resilient technology with appropriate hardware architecture supporting the chosen software application is a prerequisite for successfully implementing Gamification in higher education. Therefore, it is imperative for the HEIs to carefully evaluate the options and ensure smooth and seamless delivery of gamification benefits.

Gamification technology (Software): Thorough knowledge of the implementation of gamification technology on the part of implementing agencies and the ability to integrate it with the Learning Management System (LMS) helps to deliver what is intended. This integration requires game design and development expertise, programming, and user interface design experience (Zichermann & Cunningham, 2011). Gamification platforms often require specialized technical knowledge to develop and implement, which may not be available within the university's I.T. department (Kapp, 2012). Additionally, the integration of gamification platforms with existing learning management systems can be complex, requiring technical expertise to ensure that the platforms function effectively (Bourgonjon et al., 2013).

Hardware and software are useless if they are not compatible with the existing operating and learning management systems. Thus, HEIs should ensure that the gamification system is compatible with different operating systems, web browsers, and devices to enable all students to access the gamified learning. Compatibility issues can limit student participation and engagement (Chen et al., 2019). HEIs need to ensure that the gamification tools are compatible with various devices, browsers, and platforms to ensure that all students can access and use the tools effectively (Hamari et al., 2014).

Higher education technology administrators should ensure that the learning curve for users is manageable and that migration to the new system is easy. Users should be comfortable with the navigation of screens and a user-friendly interface for interacting with the system that can give prompts in case of deviations. A poor user experience can hinder engagement and discourage students from participating (Connolly et al., 2012).

Creating content that engages students in an immersive way is necessary to maintain the curriculum and learning objectives. Universities must invest time and resources to create game content that supports student learning and enhances engagement (Cevik et al., 2020). The university needs to have clear objectives, goals, and assessment criteria to ensure that the gamification strategy aligns with the institution's broader goals (López-Pernas et al., 2020).

Gamification requires a team of trained personnel who can maintain, configure, customize, and administer the games. The team should include experts in game design, learning design, and project management (Denny, 2013). Universities must invest in training their faculty and staff to ensure that they can effectively utilize Gamification to engage students (Dicheva et al., 2015).

Universities should design a tracking strategy to continually evaluate the progress of the system. These strategies should be aligned with the curriculum and the games' objectives to provide meaningful feedback to students and faculty (Hamari et al., 2014). The administrative staff may need to manage and track student progress, update game content, and troubleshoot technical issues (Hanus & Fox, 2015).

Financial Challenges

Cost: Hardware, software, and trained personnel could cost a fortune. So, universities must allocate sufficient funds to support the gamification system's development, administration, and maintenance (Bonde et al., 2017). Universities may need to hire additional staff or outsource the development of gamification tools to external vendors, increasing the overall cost of implementation (Denny, 2013).

Sustainability: Apart from the initial capital investment, recurring costs in the form of maintaining, updating, and securing the system will need financial resources over a long time which should be planned for. Universities must ensure that the system is sustainable and that the return on investment justifies the ongoing costs (Kapp, 2012). Developing and maintaining gamification platforms can be expensive, and universities may need to invest in hardware, software, and technical expertise to ensure successful implementation.

Return on Investment: Cost-benefit analysis is an excellent tool to ensure that the project is worth taking up. Universities must justify the financial investment to stakeholders to ensure continued support for the system (Robinson, 1993).

Behavioral Challenges:

Embracing Change: Gamification requires organizations to embrace change and equip staff with the tools to facilitate their adoption of the new behaviors and dispositions (Ergüder, 2018). This can be an uphill task for universities due to the inherent resistance to change and conservative practices in the institution. Change management requires the identification of 'champions' in each department/faculty and turning them into change agents or catalysts.

Some staff may be reluctant to engage with gamification solutions, as they may view them as an additional burden or a disruptive force in the classroom (Rana et al., 2019). Achieving congruence of personal and organizational goals is always a challenge. The administrators have to balance future benefits of the new system with the staff's need for immediate gratification in the form of incentives or promotions.

Gamification solutions should be designed to be fun and engaging for students while also providing meaningful learning experiences (Bonsignore et al., 2020). This can be a challenging task. Gamification solutions should be designed to encourage students to participate (Sullivan et al., 2018). Students, the target beneficiaries of Gamification, should be motivated to overcome the resistance to willingly adopt the new system by making the content engaging and rewarding.

Review of Recent Studies

Some recent studies on Gamification in higher education mentioned below generally lean towards its benefits to students but caution on the proper design and implementation aspects.

Godoy et al. (2021). This systematic review aims to gauge the impact of gamification on higher education. The results of the study show that Gamification has a positive impact on student motivation. However, the authors qualified their findings with some caveats. Achieving the objective of Gamification depended on several factors, such as the choice of appropriate game elements, how well the students interacted with the elements, and the context in which the game elements were placed.

Chen et al. (2020). Their study included 47 students and concluded that gamification is more impactful for STEM students in terms of student motivation, engagement, and learning outcomes. The authors called for more studies on the subject to evaluate the rigor and effectiveness of the impact of Gamification in higher education.

Kirschner et al. (2020): Their meta-analysis of 101 studies of Gamification in general and higher education found only a minor to moderate positive effect on student learning outcomes. Even such moderate improvement was in low-stakes assessments, which are short-lived. Thus, the authors recommended further research to gauge the long-term impact of gamification on higher education.

AlMarshedi et al. (2020) Provided systematic literature review by the authors that revealed conditional improvement in student engagement and motivation with the intervention of Gamification-the conditions related to the appropriate design of gamification platform and context.

Wang et al. (2020) confirmed the positive impact of gamification on enhancing student motivation and engagement in an undergraduate programming course.

Mekler et al. (2019) conducted a study of 68 students in higher education and found that Gamification resulted in higher levels of student motivation, engagement, and learning outcomes. Like other studies, the authors recommended more research to widen the research scope.

Ranalli (2018) focused on a university course on e-learning design. The introduction of Gamification was found to improve student learning outcomes with enhanced student engagement and motivation.

Sailer et al. (2017) conducted a meta-analysis of 64 studies on Gamification in education. They found that if the design of Gamification and the context were appropriately used, they could positively impact student motivation and learning.

Dicheva et al. (2015) conducted a systematic literature mapping review and found that the intervention of Gamification in higher education could improve student motivation and engagement. They further qualified their finding noting that having the correct gamification elements and context in place was imperative to derive the benefits of Gamification.

Experiences of universities across various countries on the implementation of Gamification

Overall, the experiences of universities internationally in implementing gamification strategies have generally shown improvements in student motivation, engagement, and learning outcomes. The evidence is strongly circumstantial, though not substantive, because many factors influence the outcome of Gamification in higher education, such as the proper design of appropriate game elements, context, and interactivity.

A Review of International Studies Regarding the Application of Gaming in Higher Education:

United States of America

Arizona State University

Arizona State University Ira A. Fulton Schools of Engineering implemented gamification in the engineering courses. Two faculty members designed the course work around the use of game-based techniques and strategies found commonly in video games to promote learning through increasing engagement and motivation while supporting student learning. These gaming elements include competitive challenges, reward points, and leaderboards. A survey conducted and a focus group discussion with students showed overwhelmingly positive results- the increased student motivation based on situational motivation scales in the survey and focus groups participants reported that the challenges were a fun way to engage with the course materials (Learning and Tech Hub, 2022).

University of Nebraska-Lincoln

The university continues to promote gamification and supports employees through its Center for Transformative Teaching. The university hosted its first ever Playposium to explore the power and possibilities of play and playfulness in teaching & learning. This learning community discussed gamification and gamifying for implementation across participant courses. The theme was *'Play is, at its core, fun, and there are so many different ways to incorporate play into a class'*. The Playposium also explored examples from gamified college courses, furnishing strategies and detailed plans for integrating gamification, regardless of the subject area, discipline, or modality (Warwick,, 2024).

Purdue University

Purdue University has incorporated gamification into online teaching since 2018 and offers support to faculty through its Innovation Learning (Janakiraman, 2018). The Purdue "Serious Games Center" seeks to encourage collaboration and establish a foundation for research at Purdue on serious games and virtual environments for learning, support innovative instructional practices, and establish a framework for developing and implementing engaging and innovative instruction for both K-12 and higher education classrooms (Watson, 2024). The center includes a lab for utilizing, designing, developing, and evaluating serious games and virtual environments. Usability software allows for the full capturing of user interactions within these environments.

University of Washington

University of Washington has applied gamification in various courses across the curriculum and opened a Center for Game Science: Innovating games to maximize human potential and further scientific research sponsored by Bill & Melinda Gates (Lindquist, 2020). The Center for Leadership & Strategic Thinking at the University of Washington and its partners, have been working over the last ten years on developing alternative online platforms for leadership, team and organizational assessment and development, now called a gamulation (Foster School of Business, 2024).

University of Michigan

The University of Michigan implemented a gamification platform, GradeCraft, to increase student engagement and motivation in undergraduate courses. GradeCraft allowed students to choose which assignments to complete and provided real-time feedback on their progress toward course goals (Klemmer et al., 2017). The university reported that the gamification platform resulted in increased student engagement and motivation and improved learning outcomes (Noah, 2015).

Canada

Simon Fraser University (Canada)

The university instructors are using games in their lessons to promote learning, motivation, and engagement in statistics, law, criminology, and genetic evolution. Gamifying courses have helped in breaking the fear of difficult courses and helped encourage students through game based activities. Faculty have noted increases in student motivation after the application of gamification (Simon Fraser University, 2024).

United Kingdom

University of Edinburgh

The University of Edinburgh implemented gamification approach to enhancing student empathy towards laboratory animals. fascinating game based approach to investigate students' beliefs, values, and behaviors towards lab animals. The aim is to allow players to engage with what it is to be a rat and reflect on how they currently think about lab animals. The intent is for the game to be a shared experience through which one can investigate students' beliefs, values, and behaviors towards lab animals (as sentient beings, or not). The faculty hope to do the same with current researchers - the game is a method of grounding conversations in focus groups and interviews within the human-lab animal context, allowing researchers to better grapple with notions of compassion, empathy, and ethical relations between humans and lab animals (Brossy de Dios et al., 2023).

University of Warwick, UK

The University of Warwick's Academic Technology encourages faculty to gamify their courses, allowing them to customize each module as needed in the learning management system (Warwick, 2024a). The university's Employer Connect skills training system also introduces the concept of gamification to students (Warwick, 2024b).

University of Brighton (U.K.)

The University of Brighton's website indicates the use of gamification is its student life on a campus app, and provides research authored by several faculty. The university proudly showcases its use of gamification or game-based learning in Human Resource Management, E-learning portfolio, and internship (Feather, 2017; Simpson & Jenkins, 2015).

Australia

University of Wollongong (Australia)

The University of Wollongong implemented a gamified learning environment for science undergraduates program with specific emphasis on health and safety. Each module of the course was intentional designed to increase learning and engagement, including an assessment test at the beginning of the course. The results were promising with the faculty witnessing better retention of health and safety learning outcomes among their students (Bedford et al, 2016).

Curtin University (Australia)

The Curtin University introduced gamification in its Logistics and Supply Chain Education (L & SCM) Gamifying courses through quizzes or activities on supply chain and operations. They reported gaming activities made learning more engaging as the L & SCM Education shifted from pure logistics and movement of material to increasingly integrated, process oriented management of materials, money, and information across firm boundaries. Gamification within the course showed an increase of student interest in the course, more active learning, and more student engagement (Wood & Reiners, 2012).

Singapore

National University of Singapore (Singapore)

National University of Singapore launched gamification through a new platform with features of an auto-grader functionality, an interactive discussion forum, work bin, survey tool as well as game elements like experience points, a leaderboard and badges to motivate students to compete their assignments and keep up with the class. Gamifying the classes improved the average assignment submission times from less

Table 1: Summary of the experiences of universities across various countries on the implementation of Gamification

Country	University	Stage in gamification application	Specific applications of Gamification	Results or intended results
United States of America	Arizona State University	Implemented and outcomes	Gamification	Increased student motivation, situational motivation, engagement
	University of Nebraska-Lincoln	Implemented and continuous support	Playposium	Focus on building courses for increased student engagement and motivation
	Purdue University	Implemented and continuous support	Serious Games Center	Focus on building courses for increased student engagement and motivation
	University of Washington	Implemented and continuous support	Gamulation	Focus on building courses for increased student engagement and motivation
	University of Michigan	Implemented and outcomes	GradeCraft	Increased student engagement and motivation and improved learning outcomes
Canada	Simon Fraser University	Implemented and outcomes	Gamification	Increased in student motivation and breaking the fear of difficult courses
	University of Edinburgh	Designed and implemented	Gamification for empathy	Designed a course and working on establishing a relationship between gamification and empathy, compassion, and beliefs
	University of Warwick	Implemented and continuous support	Gamification in education and career	Focus on building courses for increased student engagement and motivation; and for career connections
United Kingdom	University of Brighton	Implemented and continuous support	Gamification in education and career	Focus on building courses for increased student engagement and motivation; internship
	University of Wollongong	Implemented and outcomes	Gamification in undergraduate science program	Increased learning retention
Australia	Curtin University	Implemented and outcomes	Gamification in Logistics and Supply Chain Management	Increased interest in the course, active learning, and student engagement
Singapore	National University of Singapore	Implemented and outcomes	Gamification	Improved assignment submission time along with increased interest and motivation
	University of Cape Town	Implemented and outcomes	Gamification	Increased interest and motivation
South Africa	Nelson Mandela University	Implemented and continuous support	Gamification in fisheries crime environment	Designed an app to assist law enforcement officers in the fisheries crime environment, awaiting outcomes

than a day (15.5) hours before the deadline to more than two days (51.2 hours) before the deadline. The students also claimed that the game system made the course interesting and motivated them to work beyond what is minimally required (Leong, 2017).

South Africa

University of Cape Town (South Africa)

University of Cape Town gamified through Sakai (Vula) an online education focused application of Sakai. The gamification techniques which were found to be the most potentially effective in an educational setting were: stars, badges, progress bars, leaderboards, a storyline and a visual. By interacting with a visual and a surrounding story-line, students would immerse themselves in

the imaginary world while taking part in assessment tasks and being rewarded with stars and badges. Progress bars would motivate the student to complete the necessary tasks to receive the newest badge. Leaderboards would display the results of the top students publicly. The student showed an increased interest and motivation (O'Donovan, 2012).

Nelson Mandela University (South Africa)

Nelson Mandela University's FishFORCE Academy recently introduced a virtual law enforcement game to assist law enforcement officers in the fisheries crime environment. The game is mobile-based and available on all smartphones. The aim is to allow users to learn through experience and the use of a virtual environment, while leading them to approach problem-solving through

critical thinking. FishFORCE developed the game for the Department of Forestry, Fisheries and the Environment and the Marine and Ocean Crime Priority Crime Committee (Operation Phakisa) to benefit government law enforcement agencies (Nelson Mandela University, 2014).

Table 1 summarizes the experiences of universities across various countries on the implementation of Gamification. The uniqueness of the experiments is the variety of courses, the use of the specific applications in gamification, and the intended result. The common theme revealed in a review of recent studies of gamification shows that gamification is definitely being implemented in different levels in curriculum and career development to increase student engagement, motivation, retention, and interest. Another common theme is that institutions seem to actively support and guide faculty in developing game-based learning, and to use gamification as they conduct workshops as a part of continuous development. The shortcoming of the experiments lies in the independent application of gaming in some courses, and the lack of a consistent practice in the curriculum among colleges that might yield stronger evidence of student growth in motivation, engagement, and interest in learning using gaming applications.

Conclusion

Gamification needs to be a part of institution's strategy and not limited to the personal interest of faculty. Currently, contrary to the popular notion, Gamification is more an art than science or technology. From the psychological lens, how educational leaders motivate their faculty, staff, and students plays a central role in the success of its implementation. From the administrative point of view, management's buy-in and allotment of the financial and technical resources plus a systemic process to evaluate student outcomes related to gamification are needed to sustain the growth of gamification as a tool for learning in higher education. In conclusion, educational leaders should leverage the power of Gamification to improve student motivation, engagement, and retention for better student outcomes.

References

A. M. Bonsignore, A. R. M. Smeda, A. P. Di Serio and A. C. C. Paiva, 2020. "Gamification in Higher Education: A Literature Review." *Computers in Human Behavior*, vol. 102, pp. 191-210.

Academic Technology, (2024). Help Guides. <https://warwick.ac.uk/services/academictechnology/support/guides/moodle-guides/mdl-72>

Allam, A., Kostova, Z., Nakamoto, K., & Schulz, P. J. (2015). The effect of social support features and gamification on a Web-based intervention for rheumatoid arthritis patients: Randomized controlled trial. *Journal of Medical Internet Research*, 17(1), 1. <https://doi.org/10.2196/jmir.3510>

AlMarshedi, A., Wills, G., & Ranchhod, A. (2020). Gamification in higher education: A systematic mapping study. *Journal of Educational Technology & Society*, 23(3), 1-18.

Bedford et al. (2016). Online gamification for science undergraduates. <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=1571&context=asdpapers>

Bonde, M. T., Makransky, G., Wandall, J., & Larsen, M. V. (2017). An interactive gamified approach to enhance final-year nursing students' knowledge and skills in the management of deteriorating patients. *Nurse education today*, 56, 33-39.

Bourgonjon, J., Valcke, M., Soetaert, R., & Schellens, T. (2013). Students' perceptions about the use of video games in the classroom. *Computers & Education*, 68, 94-104.

Bui, A., & Veit, D. (2015) The effects of gamification on driver behavior: an example from a free float carsharing service. *Twenty-Third European Conference on Information Systems (ECIS)*, 1-14. Münster, Germany.

Center for Transformative Teaching. (2024). Gamification in Higher Education. <https://teaching.unl.edu/rpp/learning-communities/>

Cevik, I., Baykara, B., & Kurtulu, M. (2020). The effects of gamification on student engagement: A systematic review. *Educational Technology Research and Development*, 68(1), 1-36.

Chang, M. M. (2019). Game-based learning, gamification, and their effects on learning outcomes and motivation: A review of the literature. *Educational Technology Research and Development*, 67(5), 1145-1166.

Chen, C. H., Wang, T. I., & Huang, Y. M. (2020). Gamification in higher education: A systematic review and future research directions. *Journal of Educational Technology & Society*, 23(2), 127-142.

Chen, C. M., Wang, M. H., Chen, C. Y., & Huang, Y. M. (2019). Challenges and solutions to implementing gamification in mobile learning: A systematic review. *Journal of Educational Technology & Society*, 22(1), 137-152.

Connolly, T., Boyle, E.A., MacArthur, E., Hainey, T., & Boyle, J.M. (2012). The role of user experience in student engagement. *Journal of Computers in Education*. doi:10.1007/s40692-012-0003-3.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Springer.

Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125(6), 627-668.

- Denny, P. (2013). The effect of virtual achievements on student engagement. *Proceedings of the 18th ACM conference on computer-supported cooperative work & social computing*, 419-430.
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification." In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (pp. 9-15).
- Dicheva, D., Dichev, C., Agre, G., & Angelova, G. (2015). Gamification in education: A systematic mapping study. *Journal of Educational Technology & Society*, 18(3), 75-88.
- ELearning Team. (2015). Gamification. <https://blogs.brighton.ac.uk/elearningteam/category/gamification/>
- Employer Connect. (2024). Skills Sessions. <https://warwick.ac.uk/services/careers/employers/ourservices/skillssessions>
- Faiella, F., & Ricciardi, M. R. (2015). Gamification and learning: A review of issues and research. *Journal of e-Learning and Knowledge Society*, 11(3), 13-21.
- G. C. Rana, S. Bhardwaj, S. K. Pandey and P. Jain, 2019. "Gamification in Higher Education: A Review." *International Journal of Emerging Technologies in Learning*, vol. 14, no. 3, pp. 36-48.
- Gaming and Gamulation. (2024). <https://foster.uw.edu/centers/leadership/research/think-tank/gaming-and-gamulation/>
- Godoy, D., Valderrama, O., & Canales, C. (2021). The impact of gamification on student motivation in higher education: A systematic review. *Journal of Educational Technology & Society*, 24(2), 174-191.
- Gough, K. (2017). Value of the gamification market worldwide in 2016 and 2021 (in billion U.S. dollars). Statista. Statista Inc. Accessed: May 22, 2020. <https://lynn-lang.student.lynn.edu:2093/statistics/608824/gamification-market-value-worldwide/>
- Growingthengineering. (2019). History of Gamification. Retrieved from <https://www.growingthengineering.co.uk/history-of-gamification/>
- Hamari, J., & Koivisto, J. (2015). "Working out for likes": An empirical study on social influence in exercise gamification. *Computers in Human Behavior*, 50, 333-347.
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work?--A literature review of empirical studies on gamification. *Proceedings of the 47th Hawaii international conference on system sciences*, 3025-3034.
- Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & Education*, 80, 152-161. <https://files.eric.ed.gov/fulltext/EJ1376243.pdf>
- J. A. Sullivan, M. Chini, and J. Roselli, 2018. "Gamification in Higher Education: A Systematic Literature Review." *International Journal of Serious Games*, vol. 5, no. 3, pp. 1-20.
- Kapp, K. M. (2012). *The gamification of learning and instruction: Game-based methods and strategies for training and education*. John Wiley & Sons.
- Kirschner, P. A., van der Molen, J. H. W., & Meijer, P. C. (2020). A meta-analysis of gamification in education. *Educational Psychology Review*, 32(2), 427-464.
- Klemmer, S. R., Mejia, C., Chun, M., & Hartmann, B. (2017). GradeCraft: A gamified approach to increasing student motivation and engagement. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 24(4), 1-33.
- Learning and Tech Hub. (2022). Academic Innovators: Alicia Baumann and Haolin Zhu Gamification. <https://lth.engineering.asu.edu/2022/04/academic-innovators-gamification/>
- Lindquist, T. (2020). UW Center for Game Science: Innovating games to maximize human potential and further scientific research. https://www.dailyuw.com/news/uw-center-for-game-science-innovating-games-to-maximize-human-potential-and-further-scientific-research/article_5dd4f3c2-3816-11ea-98ff-7bd49f563680.html
- López-Pernas, S., García-Sánchez, E., & Gómez-Barroso, J. L. (2020). Gamification in education: A review of literature. *Sustainability*, 12(5), 1845.
- mandela.ac.za/news. (2014). FishFORCE Academy assists fisheries law enforcement with virtual game. <https://news.mandela.ac.za/News/FishFORCE-Academy-assists-fisheries-law-enforcemen>
- Mazareanu, E. (2020). Emerging research approaches used in the market research industry worldwide in 2019. Statista. Statista Inc. Accessed: May 22, 2020. <https://lynn-lang.student.lynn.edu:2093/statistics/875902/market-research-industry-emerging-research-approaches-used/>
- Mekler, E. D., Brühlmann, F., Tuch, A. N., & Opwis, K. (2019). Towards understanding the effects of individual gamification elements on intrinsic motivation and performance. *Computers in Human Behavior*, 95, 131-141.
- Noah, T. (2015). Platform aims to shift basis for class grades. <https://www.michigandaily.com/uncategorized/gradecraft/>

- NUSCast. (2017). TEL Engagement with Gamification Assoc Prof Ben Leong. https://lift.nus.edu.sg/learning_projects/improving-student-engagement-with-gamification/
- O'Donovan, S. (n.d.). Gamification of the Games Course. https://pubs.cs.ucl.ac.za/id/eprint/77111/Gamification_of_the_Games_Course.pdf
- Przybylski, A. K., Rigby, C. S., & Ryan, R. M. (2009). A motivational model of video game engagement. *Review of General Psychology*, 14(2), 154-166.
- Purdue Repository for Online Teaching and Learning (2018). <https://www.purdue.edu/innovativelearning/download/gamification/?wpdmdl=2009&refresh=6624541845e021713656856>
- Ranalli, J. (2018). Towards a model of engaging online students: Lessons from MOOCs and four policy documents. *Distance Education*, 39(3), 305-323.
- Robinson, R. (1993). Cost-benefit analysis. 307(6909):924-6. doi: 10.1136/bmj.307.6909.924. PMID: 8241859; PMCID: PMC1679054.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Sailer, M., Hense, J. U., Mayr, S. K., & Mandl, H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior*, 69, 371-380.
- Serious Games Center. (2024). Support for implementing games in the classroom. <https://education.purdue.edu/research/centers-and-institutes/serious-gaming-center/>
- sfu.ca/news. (2024). SFU instructors are using games in their lessons to promote learning and engagement. <https://www.sfu.ca/vpacademic/news/2024/02/SFU-instructors-are-using-games-in-their-lessons-for-more-effective-learning.html>
- Simpson, P & Jenkins, P. (2015). Gamification and Human Resources: An Overview. https://www.brighton.ac.uk/_pdf/research/crome/gamification-and-hr-overview-january-2015.pdf
- Sousa, M., Zagalo, N., & Oliveira, A. P. (2021). Mechanics or Mechanisms: defining differences in analog games to support game design. <https://ieeexplore.ieee.org/document/9619055/citations#citations>
- T. Ergüder, 2018. "Gamification in Higher Education: A Review." In: M. A. Khosrow-Pour (ed.). *Encyclopedia of Information Science and Technology*, Fourth Edition. IGI Global, pp. 3971-3979.
- Tara J. Brigham (2015) An Introduction to Gamification: Adding Game Elements for Engagement, *Medical Reference Services Quarterly*, 34:4, 471-480, DOI: 10.1080/02763869.2015.1082385
- Teaching Matters Blog. (2023). Developing a digital game to explore compassion towards laboratory animals. <https://www.teaching-matters-blog.ed.ac.uk/developing-a-digital-game-to-explore-compassion-towards-laboratory-animals/>
- Wang, X., Zhang, D., Li, J., & Zhao, J. (2020). Can gamification improve student engagement and learning outcomes? An empirical study of a programming course. *Computers & Education*, 146, 103768.
- Werbach, K., & Hunter, D. (2012). *Gamification: How game design motivates people to do extraordinary things*. Wharton Digital Press.
- Werbach, K., & Hunter, D. (2012). *Gamification: How game design motivates people to do extraordinary things*. Wharton Digital Press.
- Wood, L & Reiners, T. (2012). Gamification in Logistics and Supply Chain Education: Extending Active Learning. https://espace.curtin.edu.au/bitstream/handle/20.500.11937/16889/188446_68141_Gamification_in_Logistics_paper.pdf?sequence=2&isAllowed=y
- Zichermann, G., & Cunningham, C. (2011). *Gamification by design: Implementing game mechanics in web and mobile apps*. O'Reilly Media, Inc.

Harika Rao, Ed.D., is an Associate Dean and Associate Professor in the College of Business and Management at Lynn University, Florida.

Beyond the Field Experience

Restoring the Coastline

by Kelly Greene, Managing Editor

Reprinted from Wake Forest Magazine,
Web Exclusive, January 16, 2024

J. Taylor Ryan (Class of '62) is leading work to stave off erosion and pollution, one bag of oyster shells at a time.

About 100 volunteers ranging from elementary school students to grandparents line up twice a year along the Intracoastal Waterway in St. James, North Carolina, under the intense sun and ankle-deep in muck. They move hundreds of bags of oyster shells, bucket-brigade style, to extend what has become known as a living shoreline, designed to stem erosion and pollution from the constant stream of boat traffic.



"Every oyster cleans 30 to 50 gallons of water a day - that's bathtub size," says J. Taylor Ryan ('62, P '96), who instigated the first oyster-reef build in 2005. He has kept the work going for 18 years and continues to gather momentum. Along with the retirees who make up the project's backbone, participants each summer include teenagers from a nearby coastal-studies camp and family members visiting St. James residents. In the fall, area high school students reinforce the project's stalwarts.

Their barrier now spans at least 700 feet in St. James' Waterway Park, and Ryan hopes to add another 2,500 feet. University of North Carolina Wilmington students regularly research its impact. (For example, where no oysters lived 18 years ago, there are now more than 600 per square meter.) And the St. James Conservancy, formed two years ago, is bringing together the living shoreline work with other environmental initiatives including a bird rescue group and turtle watch.

The project's spark came a few years after Ryan moved in 2001 from New Jersey to a home fronting the Intracoastal Waterway. He was struck by the continuous boat traffic he watched from his backyard - sometimes as many as 100 vessels an hour - and the resulting erosion and pollution.

Through one of the many local fishing and conservation groups he had joined, he found a daylong seminar in 2005 on the ways oysters can improve the coastline's health. When people return oyster shells to the water, baby oysters settle on them and go to work as natural filters. Bagged oyster shells and marsh grasses installed together can reduce boat wake damage and restore a natural habitat that otherwise might be lost. The idea is that the living shoreline grows over time, creating a more natural solution to shoreline erosion and pollution, while improving marine life, rather than building a concrete sea wall.

Oyster-reef restoration is critical along the North Carolina coast, Ryan learned, both to deal with depleted oyster populations and also hydrology issues. And human-made oyster reefs can work just as well as natural ones to protect coastal marsh and shorelines, stabilize sediment, enhance the habitat for fish and shellfish and improve water quality through the filtering capabilities of the salt marsh grasses and oysters, according to the North Carolina Coastal Federation's Oyster Restoration and Protection Plan for North Carolina.

After learning that volunteers could build living shorelines themselves, Ryan used the networking skills he had developed during a career in sales at IBM to get the project going. (He had a long-time interest in the environment as well, having served as a wilderness guide at scout camp and commanding a company in charge of three ships on the Chesapeake Bay as a U.S. Army officer upon graduating from Wake Forest. In fact, Ryan had considered majoring in biology over business as an undergraduate but was dissuaded by the German language requirement.)



Ryan reached out to Troy Alphin, a senior research associate at the Benthic Ecology Laboratory, part of UNCW's Center for Marine Science. Alphin says he encouraged Ryan, suggesting: "Why don't you become a citizen scientist? We'll help you build a reef, and you can help us collect the data?"

With that encouragement, Ryan approached St. James' mayor at the time, Shelley Leshner, now deceased, whom he asked how he might apply for a \$5,000 grant to rent a loader and buy oyster shells. She pledged the money on the spot.

"I thought, 'Uh oh, what do I do now?'" Ryan recalls with a chuckle, because he had expected to have time to figure it out while rounding up funding. He quickly sought advice from the North Carolina Coastal Federation and UNCW on

how to buy 21 cubic yards of oyster shells and sent an email "to everybody in town asking for volunteers to bag shells." At the time, St. James had about 1,500 residents, and 94 people showed up.

Alphin, who was on vacation the day Ryan's volunteers were set to gather, remembers thinking a dozen people might come and that he would swing by to talk to

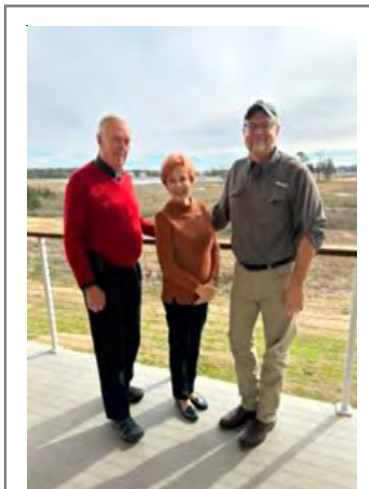
them for a few minutes. He was stunned to see eight times that number - and to watch them fill 1,500 bags with oysters in three hours, something that had taken other communities three months to do.

After the volunteers bag the shells, they have to wait six to 12 weeks to return them to the water to attract larvae floating with the tide and seeking a hard surface. When they find the shells, they attach - and from there, the oysters grow and make more shells on their own, Ryan says. About six weeks after the St. James volunteers had built their first 50 feet of reef, about three-quarters of a million oysters were growing, inspiring the newly minted team of citizen scientists to keep going.

The project soon galvanized into the "Royal Order of the Honorary St. James Oyster," which is heading into its 19th year with as many as 160 volunteers at builds planned around low tides, typically in July and October. The local sheriff's marine patrol helps slow down boats to minimize wakes. And St. James' town government has continued to support the project financially, including funding UNCW interns. In fact, the university recognized Alphin and the town of St. James for "Excellence in Community Engagement" in 2022.

"Taylor was really ahead of his time in identifying what he felt was important in protecting the shoreline, and he has a great deal of energy," Mayor Jean Toner says. "He really is amazing in how he developed this nice partnership."

Ryan's gift for bringing like-minded groups together also led to the creation of the **St. James Conservancy**, whose 130 members are working on ways to expand the town's designation as a UNCW research sanctuary and bird sanctuary to becoming a certified wildlife habitat as well, among other initiatives. Jan. 3 marked its second anniversary.



Ryan, Mayor Jean Toner, Alphin

One of Ryan's early recruits was Lucy Greene Williams, who first connected with Ryan when they were both volunteering as part of a turtle-watch team at Caswell Beach. She, too, had worked at IBM, so while keeping an eye on turtle nests for signs of hatching, they shared stories and Ryan asked her to join the living shoreline crew. "When I started out, I was carrying the shells and planting the grasses," she says. "My friend's whole tennis shoe stayed stuck in the mud. I would come home and want to throw away my clothes, we got so dirty."

These days, she serves pizza and cookies to volunteers and admires how Ryan "works the crowd. He gets the (local) folks volunteering to meet the campers, because these kids come from all over the country. He's gotten the town involved in supporting the research. Our clubs give us the food. And he has such a phenomenal relationship with the folks at UNCW," she says.

Kenneth M. Halanych ('88), a biology major who has become a prolific marine invertebrate scientist, became Executive Director of UNCW's Center for Marine Science two years ago - and soon met Ryan, "wearing his Wake paraphernalia," at an evening seminar. "The power of the living reef is that it stabilizes the sediment. They also dissipate the currents and the wave actions," Halanych says. "There's a lot of value in what Taylor and St. James are doing and the way they're doing it, because it promotes societal awareness about resiliency - and how we can damage or repair the environment. "And the big piece here is the great collaboration between university scientists and the lay public," he says.

Ryan has recruited students to Wake Forest as well, including Alphin's daughter, Kathryn Alphin ('22), who started helping with the oyster-reef builds around age 6 or 7. "It was super fun," she says. "I didn't quite understand what was going on at such a young age, but I knew it was helping the earth, helping my home and helping Dad."

She continued to work on the living shoreline builds in high school, and Ryan encouraged her to attend the speaker series he organized around environmental issues and current events. Later, he wrote a recommendation letter for her application to Wake Forest's master's program in health and exercise science.

Seeing many generations working together to save the coastline is "the coolest thing about the project," Williams, the alumna who volunteers alongside Ryan, says. "At Wake, I was a religion major, and then I had a career in tech. I had always wanted to make a difference, and so did Taylor."

Now, the waterway beyond Ryan's backyard has shown measurable improvement. UNCW interns using gauges and drones to track the movement of silt have documented progress. More than 36 species have colonized the living shoreline, including multiple types of crabs, gastropods, mussels, amphipods and shrimp, Alphin says.

More than 48 species of nekton (actively swimming aquatic fauna) also have moved in, including juvenile stages of fin-fish such as red drum.

And even when Hurricane Florence battered St. James in September 2018, the oyster shells "stabilized the coastline," rather than its suffering erosion, Ryan says proudly. "The living shoreline did exactly what it was supposed to do."



About the Author:

Kelly Greene ('91) joined Wake Forest Magazine as managing editor in 2023. Most recently, she was the CEO speechwriter at TIAA in New York. Before that, she was a reporter and columnist for more than two decades at The Wall Street Journal, where she co-authored the best-selling "Wall Street Journal Complete Retirement Guidebook" and contributed to the Journal's Pulitzer Prize for coverage of the Sept. 11, 2001, terrorist attacks.

From the Field: Practical Applications of Research

FDR: Governor, President and Advocate for Youth

by Edward J. Sullivan, Ed.D.

Abstract

FDR - a moniker that immediately identifies one of the greatest presidents to serve the United States. FDR (Franklin Delano Roosevelt) is credited with guiding our nation through the Great Depression and leading the Allies to victory in World War II. This report traces FDR's route to being a governor and president. It explores one of FDR's signature New Deal programs, the National Youth Administration {NYA}.

The advent of Progressivism is considered in this report for its impact on Roosevelt's views and actions. Progressivism may have influenced FDR's views on children, their education, and the role of government in the lives of its citizens.

FDR's Early Years and Rise in Politics

Franklin Delano Roosevelt (FDR) was born on January 30, 1882. The only child of James and Sara Delano Roosevelt, Franklin was raised in a household emulating strong ties to Episcopalian values (Freidel, 2022). His early education was provided by governesses, common for children born of privilege being raised in the late nineteenth century.

For his secondary grade education, at age 14, FDR enrolled in the Groton School, an Episcopalian boarding school, in Groton, Massachusetts. The values of character, scholarship, and service were inherent in Groton's mission. Nurture at home and education at Groton prepared FDR to be a "gentleman, assuming responsibility for those less fortunate and exercising Christian stewardship through service" (Freidel, 2022).

Upon graduating from the Groton School, Roosevelt entered Harvard University in 1900 and graduated in 1904. At Harvard, FDR studied a curriculum developed by its president, Charles W. Eliot, a Unitarian who instilled values of dignity and the worth of the person into the curriculum (Hamby, 2016).

FDR's entry into the political arena began in 1910 when he was elected to a Senate seat in the New York State Legislature. He was re-elected to this position in

1912 and resigned in 1913 upon being appointed as Assistant Secretary of the Navy by President Woodrow Wilson. The thirty-one-year-old Roosevelt was assigned the responsibility of directing the Navy's day-to-day operations and served in this capacity for seven years. Dealing with the slow pace of governmental bureaucracy, FDR "insisted that when something had to be done, there was always a way to do it, whether it involved by-passing regulations, cutting through red tape, or breaking precedent" (Kearns-Goodwin, 2018, pp. 61-62).

Roosevelt was chosen to be the Democratic candidate for governor of New York in 1928. Roosevelt triumphed in an election nail-biter over Albert Ottinger "by 25,608 votes out of the four million cast" (Smith, 2007, p. 228). Roosevelt's feat is even more remarkable considering that, in the presidential election that year, Republican Herbert Hoover handily won New York.

Progressivism and its Impact on Franklin D. Roosevelt

From the time of FDR's birth in 1882 through his two terms as New York's Governor that ended in 1932, "... technological advances and economic policy changes began to change a society's view: children should be educated, rather than work" (Lynch, 2015, p. 153). This period is known as the era of Progressivism.

Progressivism in education resulted in several noteworthy developments including free public schooling, compulsory education, schools with set grade-level designations, and a comprehensive curriculum emphasizing basic skills, health, vocations, civics, and the arts (Lynch, 2015).

In tandem with Progressivism, psychology stroked the concept of the development of the individual as an essential to a successful society. The notable psychologist, John Dewey, posited that "the essence of the new education... was to shift this center of gravity back to the child" (Cremin, 1961, p. 118). Dewey maintained that problem-solving strategies, projects that integrated curriculum objective, and meaningful experiences should shape the education of the individual.

With Progressivism as a backdrop, Roosevelt's innate concern for others propelled his agenda as governor of New York even though there is no mention of education in his January 1, 1929, inauguration speech (Roosevelt, 1929/2011a). His first legislative agenda for New York included proposals (roads, food delivery, hydroelectric power) related to the development of rural areas (Smith, 2007). The following day, in a State of the State, two paragraphs were relevant to education. One paragraph addressed fair funding of rural school districts and proposed that it be related to the wealth of districts. The second reference to education was more personal. In this paragraph, Roosevelt called for "removing the physical handicaps of its citizens" and announced his plan to submit a proposal for the "education of the mind..." (Roosevelt, 1929/2011b, p. 10).

In an August 28, 1931, speech to the New York Legislature, Roosevelt's remarks were a harbinger of the New Deal, although the term was not used. The idea that government had the definite responsibility - a 'social duty' - to use the resources of the state to prevent distress and to promote the general welfare was first suggested at that time (Smith, 2007).

As the apocalyptic Depression's grip tightened on the national economy with an approximate 25 percent unemployment rate, Roosevelt, during his second term as governor (1931-1932), led the passage of measures for employment and availability of food. New York became a model for the New Deal Federal Emergency Relief Administration (FERA) established in 1933, during Roosevelt's first full year as president.

FDR's terms as governor were helpful to education although they may be considered modest in their impact. Attention was given to disparities in funding school districts and providing educational opportunities for children in less affluent localities. Roosevelt's commitment to a reasonable education for all children demonstrated his inherent and acquired values and served as a foundation for his terms as President of the United States.

Roosevelt's Presidency and Focus on the Nation's Youth

The Great Depression's impact on citizens was viewed as a malaise that was cultivating feelings of hopelessness and extreme anxiety. The public viewed Roosevelt as being capable of leading the country out of the Depression with the responsible use of governmental resources. His opponent in 1932 was incumbent Herbert Hoover who offered the public less government involvement in their lives. The election resulted in a landslide with Roosevelt receiving 17.76% more votes than Herbert Hoover and receiving a tally of 472 to 59 Electoral College votes (Kearns-Goodwin, 2018).

Themes of FDR's first inaugural address centered on banking and the interdependence of nations. His remarks noted the country's deep poverty, long-term unemployment, and feelings of panic (Kearns-Goodwin, 2018).

Social and economic issues of the Great Depression were foremost in the importance of the work associated with Roosevelt's first one hundred days following inauguration. There "...was a severe worldwide economic disintegration...occurring. Nearly 25 percent of America's labor force were unemployed" (Smith, 2007, p. 1). Roosevelt targeted relief measures in agriculture, manufacturing, and financial reform as economic engines requiring immediate attention.

Coinciding with Roosevelt's platform to address Depression issues, "leaders in education, industry, labor, and Government became acutely aware of what was happening in Europe, where Fascism had progressed alarmingly, and youth's aggressive energies were being exploited by ruthless leaders determined to use the world-wide economic disturbances to their own ends. The Nation's leaders recognized that the wide-spread idleness of youth was fraught with grave social consequences" (NYA, 1944, p. 233).

President Roosevelt continued to lay the groundwork for the New Deal when he presented the twin issues of social justice and employment in his 1935 State of the Union address. Roosevelt emphatically noted, "...we have not weeded out the over-privileged ..." (Roosevelt, State of the Union, 1935/2011c, pp. 3-4). Emphasizing that relief alone is not the answer, FDR stated that the federal government has the resources to assist the less fortunate to "preserve not only the minds and bodies of the unemployed from destitution but also their self-respect, their self-reliance and courage, and determination" (Roosevelt, State of the Union, 1935/2011c, pp.3-4).

FDR's New Deal proposal planned to reduce the number of youths working while under the age of sixteen and alleviate adult unemployment. A corollary benefit to eliminating under-age labor would be that youth would continue their schooling and be more prepared in the future for jobs requiring enhanced skills (Reiman, 1992). Later, FDR stated, "...I have always recognized that the youth of today are our sole investment in tomorrow" (Roosevelt, Informal remarks, November 11, 1935/2011d, p. 2).

In December 1935, Roosevelt was visited by state superintendents during which time his comments can be interpreted as his clarion call for social justice and equality in education. Roosevelt stated, "I knew that the use of relief funds, for instance, for the building of schoolhouses and the repair of schoolhouses...would help the physical side.... I frankly did stretch the law when it came to some other things, such as the employment of teachers who are on the relief rolls. Helping boys and girls to attend high schools and colleges, that was stretching the law a little bit" (Roosevelt, 1935/2011e, pp. 2-3). Roosevelt proceeded to cite gains of his bold actions: 42,000 teachers given work, 500,000 students taught reading and writing. \$14.5 million provided to 13 states to keep rural schools open, and \$7 million provided as general aid to 16 states.

Roosevelt's second inaugural address of January 20, 1937, explicitly mentioned the value of education for a nation recovering from the Great Depression by citing a vision for social justice when he proclaimed, "I see millions denied education, recreation and the opportunity to better their lot and the lot of their children" (Smith, 2007, p. 5). FDR furthered his vision by encouraging Congress to, "...provide enough for those who have too little" (Smith, 2007, p. 9).

Prior to his third inaugural address, Roosevelt delivered his annual budget message to Congress stressing themes that portray his moral compass by proclaiming, "The basic things expected by our people of their political and economic systems are simple. They are: equality of opportunity for youth and for others, jobs for those who can work, and security for those who need it" (Roosevelt, 1941/2011g, p. 19).

Roosevelt delivered his third inaugural address on January 20, 1941, and concluded by envisioning four essential freedoms:

- Freedom of speech and expression
- Freedom of every person to worship God in his own way
- Freedom from want
- Freedom from fear

(Dunn & Bechloss, C-SPAN, 2018)

A Signature Program in Roosevelt's New Deal: National Youth Administration

The National Youth Administration (NYA) program established during Roosevelt's presidency is a tribute to his belief that government's duty is to "care for its citizens who are unable, through adverse circumstances, to maintain their lives without help" (Kearns-Goodwin, 2018, p. 179). His advocacy for the less fortunate resulted from values bolstered by his upbringing and formal education at Groton and Harvard. The influence of the era of Progressivism supported this belief and aided Roosevelt's support for the individual.

Roosevelt and his advisors determined that the Works in Progress Administration (WPA) program, the iconoclastic New Deal plan, was not fulfilling employment expectations for youth (Williams, 1935a). The NYA was created by FDR's Executive Order on June 28, 1935 for the purposes of: finding employment in private industry for unemployed youth, training and retraining young people for industrial, technical, and professional employment opportunities, providing for continued attendance at high schools and colleges, and supporting work relief projects designed to meet the needs of youth (Williams, 1935b). At the inception of the NYA, "Only half of these NYA boys and girls even went to school a day beyond the eighth grade"

and another 47% left high school before graduating 12th grade (Lindley & Kidder-Lindley, 1972, p. 18).

In cheerleading the NYA initiative, President Roosevelt stated, "You ought to thank God tonight if, regardless of your years, you are young enough to dream dreams and see visions - dreams and visions about a greater and finer America that is to be....If that is the fashion of your dreams then I say: Hold fast to your dream. America needs it" (NYA, 1937, p.38).

In NYA programs, 100,000 students attended high school and 120,000 enrolled in college. High school students worked a maximum of 3 hours each school day and 7 hours per non-school day; They were paid six dollars per month. College and graduate students were limited to 8 hours of work per day and received fifteen dollars each month (United States Department of Labor, 1941).

The National Youth Administration accomplished significant physical projects aimed at quality of life. Perhaps as recognition of Progressivism, the motto of the National Youth Administration was learning by doing (Reiman, 1992). Projects completed through the auspices of the NYA included:

- constructed 125 schools and libraries and made repairs to 4,459 others,
- erected 50 gymnasiums and dormitories and repaired 233 gyms/dormitories,
- built 7,714 athletic facilities, fields, swimming pools, tennis courts, etc., and repaired 15,196 more, and
- funded projects for highways, furniture construction, landscaping, painting, etc. (Williams, 1939).

In 1939, the NYA was transferred to the Federal Security Agency and then to the War Manpower Commission in 1942 (Final Report, 1944). This latter change aimed to recruit soldiers for the declared World War II.

The NYA was liquidated as a federal program effective January 1, 1944. Factors leading to its termination were: high employment rates no longer necessitated a major relief program of putting youth to work, removal of an avenue from which youth could avoid conscription, and transfer of funds to other federal departments needing financial support for the war effort (Termination of Civilian Conservation Corps and National Youth Administration, 1942).

In its eight years of operation, the NYA expended \$662,300,000 (nearly \$11.6 trillion in today's money) of which \$169,500,000 was spent as wages for programs that connected work with continued education, either at

the high school or college level, and \$467,600,000 as wages for unemployed youth who were finished with their schooling (Final Report, 1944).

Roosevelt's Final Years

The promise of providing an equitable educational system for rural communities continued to concern FDR late into his third term as President. Addressing the Education Conference on Rural Education in October 1944, Roosevelt noted, "We cannot be proud of the fact that many of our rural schools...have been sadly neglected" (Roosevelt, 1944/2011g, p. 4). As partial justification for his claim FDR reported that nearly one-third of teachers in rural schools held an emergency teaching certificate and that approximately 800 rural schools might not have a teacher in the coming school year (Roosevelt, 1944/2011g, p. 3).

FDR's final Budget Message to Congress proposed the re-organization of the Office of Education, called for the renewal of efforts to improve elementary and secondary education, and stressed that financial aid to states be without federal interference as long as the needs of children are being addressed (Roosevelt, 1944/2011h).

FDR's death occurred at age 62 on April 12, 1945. Previously diagnosed with a severe heart problem, Roosevelt's quick death resulted from a cerebral hemorrhage (Kearns-Goodwin, 2018).

Summary

Franklin D. Roosevelt, accomplished Governor of New York and one of the greatest presidents, led citizens from the depths of the Great Depression and the threat of a world war to create programs that would favorably impact youth, benefit their education, and prepare them for lifelong skills. One of his most successful programs was the National Youth Administration (NYA).

References

Cremin, L. (1961). *The transformation of the school: Progressivism in American education, 1876-1957*. Alfred A. Knopf.

Dunn, S., and Bechloss M. (2029, June 18). The Roosevelt story: Four freedoms speech. Roosevelt Reading Festival, C-SPAN2.

Freidel, F. (2022). Franklin D. Roosevelt. Encyclopedia Britannica online. [#ref23940](https://www.britannica.com/biography/Franklin-D-Roosevelt)

Hamby, A. (2016, June 18). The Roosevelt story: Man of destiny FDR and the making of the American century. Roosevelt Reading Festival I. C-SPAN2.

Kearns-Goodwin, D. (2018) *Leadership in turbulent times*. Simon and Schuster.

Lindley, B. & Kidder-Lindley, G. (1972). *A new deal for youth: The story of the national youth administration*. DaCapo Press.

Lynch, M. (2015). *The call to teach: An introduction to teaching*. Pearson Education, Inc.

Reiman, R. (1992). *The new deal & American youth: Ideas and Ideals in a depression decade*. The University of Georgia Press.

Roosevelt, F. D. (2011a). *Address to the legislature*. {Speech transcript}. FDR Library, (Box 6, File 301). Franklin D. Roosevelt, Master Speech File, 1898-1945. (Original work presented 1929, January1).

Roosevelt, F. D. (2011b). *Convocation of Regents* {Speech transcript}. FDR Library, (Box 7, File 344). Franklin D. Roosevelt, Master Speech File, 1898-1945. (Original work presented 1929, October 17).

Roosevelt, F. D. (2011c). *Message to Congress on the state of the union* [Speech transcript]. FDR Library (Box 20, File 759). Franklin D. Roosevelt, Master Speech File, 1898-1945. (Original work presented 1935, January 4).

Roosevelt, F. D. (2011d). *National students federation group - Remarks* [Speech transcript]. FDR Library (Box 23, File 816). Franklin D. Roosevelt, Master Speech File, 1898-1945. (Original work presented 1935, November 11).

Roosevelt, F. D. (2011e). *Remarks to 36 state superintendents of education* [Speech transcript]. FDR Library (Box 24, File 832). Franklin D. Roosevelt, Master Speech File, 1898-1945. (Original work presented 1935, December 13).

Roosevelt, F. D. (2011f). *Message to Congress - The state of the union (2 parts)* [Speech transcript]. FDR Library (Box 58, File 1353a-c). Franklin D. Roosevelt, Master Speech File, 1898-1945. (Original work presented 1941, January 6).

Roosevelt, F. D. (2011g). *Address to the educational conference* [Speech transcript]. FDR Library (Box 80, File 1538). Franklin D. Roosevelt, Master Speech File, 1898-1945. (Original work presented 1944, October 4).

Roosevelt, F. D. (2011h). *Budget message* [Speech transcript]. FDR Library (Box 85, File 1567). Franklin D. Roosevelt, Master Speech File, 1898-1945. (Original work presented 1944, December 31).

Siena College Research Institute. (2022). US presidents study historical rankings [Data set]. <https://scri.siena.edu/us-presidents-study-historical-rankings/>

Smith, J. (2007). *FDR*. Random House.

Termination of civilian conservation corps and national youth administration, Hearings before the committee on education and labor. 77 Cong. (1942).

Tyack, D., Lowe R., & Hansort, E. (1984). *Public schools in hard times: The great depression and recent years*. Harvard University Press.

United States Department of Labor. (1941). Activities of national youth administration, 1935-40. *Monthly Labor Review*, 52(5).

United States National Youth Administration. (1936). *Facing the problems of youth: The work and objectives of the national youth administration*. U. S. Government Printing Office.


United States National Youth Administration. (1944). *Final report of the national youth administration: Fiscal years 1936-1943*. <https://www.loc.gov/item/44040856/>

Williams, A. (1935a, June 30). Youth to be aided in hard struggle: Federal agency undertakes to see that talents are not wasted in depression. *New York Times*, E10.

Williams, A. (1935b, November 24). Aid for needy students: The NYA director tells how his agency helps youth continue in the schools. *New York Times*, X9.

Williams, A. (1939). The work of the national youth administration. *Living*, 1(4), 65-66. doi: 10.2307/346538

Dr. Edward J. Sullivan is in his 58th year as an educator. His career includes being a teacher, school administrator, superintendent of schools, college professor, Associate Dean for Teacher Education, and Adjunct Academic Advisor.



**What does it take
to transform the
systems that
impact learning and
human development?
YOU.**



Wheelock College of Education
& Human Development



bu.edu/wheelock

Book Review:

The Business Side of School Success: What Superintendents and Other School Leaders Need to Know

**By Brian L. Benzel, Ph.D., Kenneth E. Hoover, Ph.D.,
and James Parla, Ed.D.**

**Reviewed by George L. Duffy,
Executive Director, SCOPE Education Services**

Superintendents of Schools enter their positions from a variety of pathways. Many district leaders follow a very traditional path from classroom teacher, building level administrator, Assistant Superintendent, and finally Superintendent of Schools.

There are also situations in which an individual is appointed directly from the building level position, usually a principal, directly to the position of Superintendent. Regardless of the pathway, it is vitally important that the superintendent be familiar with every aspect of the operation of the school district. Far too often, the newly appointed superintendent, whom may have tremendous knowledge in the operation of a school, the appropriate evaluation of staff and the implementation of curricula and standards, may be deficient in their knowledge of the business operation of the district and the vital role the school business office plays in the delivery of instruction.

The co-authors of this publication all having many years of experience in various leadership roles, including school business operation and the overall leadership position as superintendent of schools, provide the reader with a valuable tool to assist with the proper management of a school district both fiscally and instructionally. This book would prove to be an invaluable primer to both the inexperienced school administrator as well as the seasoned district level leader regarding the crucial role the business operation plays on the overall delivery of instruction.

Each chapter of "The Business Side of School Success," begins with a short description which reads: "This chapter will help leaders learn to..." followed by a very brief description of what the reader should look for

as they digest the information included in the chapter. Chapter by chapter one finds "Case Studies," real life situations involving the daily operation of a school and or school district. These scenarios are followed by, "If you were the superintendent..." With a listing of questions a superintendent may ask in order to properly address the issues encountered in each given situation. Each question is then addressed by the co-authors, utilizing their vast expertise and knowledge of the operation of a school district with a focus of the role played by the business side of district operations. At the conclusion of each chapter the co-authors provide the reader with, "Tips based on experience" and or "Tips for the superintendent," which may assist the school leader in the proper management of the district.

The operation of a school district and the complex relationship which the school business operation has on the instructional programs and all the various components including: budget development, revenue, property taxes, accounting and monitoring fiscal status, co-curricular activities, audits, human resources, food services, maintenance and custodial operation, technology and safety and security are some of the topics addressed in, "The Business Side of School Success."

School leaders and those preparing to be future school leaders will find this book a plethora of valuable information which may be utilized in the very complex operation of a school district and the major positive impact which an appropriate school business operation may have on the delivery of instruction and services to the students and community it serves.

Copyright 2022 by BHP Authors, LLC
ISBN 13-979-8-8171-4334-8



Professional Development

SCOPE is an approved sponsor of Continuing Teacher and Leader Education (CTLE).

Professional Development Courses:

At SCOPE Education Services, we understand the unique challenges you face as an educator. We have developed courses (ranging from engaging students in emerging technologies to working with students who have disabilities) that will aid you in tackling these challenges.

To find out more about our current [Online courses](#) for educators, visit:

WWW.SCOPEONLINE.US

or contact:

Betty Westcott at 631-360-0800 x129
or email bwestcott@scopeonline.us



**SCOPE Education Services
100 Lawrence Avenue
Smithtown, New York 11787**

2023-2024 SCOPE Directories

- | | |
|---|---------|
| 1. SCOPE Directory of Suffolk County Public Schools ,
including Educational Associations, Organizations and Unions
serving Long Island | \$25.00 |
| 2. SCOPE Directory of Private and Parochial Schools on Long Island | \$15.00 |
| 3. SCOPE Directory of Mid-Hudson Public Schools | \$20.00 |
| 4. Nassau County Public Schools | \$15.00 |

For information on ordering and discounts, call (631) 881-9660,
or email ccosme@scopeonline.us,
or download the order form at www.scopeonline.us/publications.

*Note: Prices shown do not include 8.625% NYS sales tax
or postage and handling.*



Advanced Degree Programs for Aspiring Teachers.

Earn the professional recognition and personal achievement you seek with a graduate degree from Hofstra University. Whether you study full or part time, you will benefit from small class settings with nationally recognized faculty and a community of peers all contributing to a transformative learning experience. Hofstra University offers master's, doctoral, and certificate programs, with a variety of opportunities geared for career changers and veteran educators.

- Applied Behavior Analysis
- Early Childhood and Elementary Education
- Educational Leadership: K-12 and Higher Education
- Health and Physical Education
- Literacy Studies
- Secondary Education
- Special Education
- TESOL and Bilingual Education

Learn more at
hofstra.edu/rtac





New England School Development Council

Celebrating over seventy-five years of service to education

-  **Planning and Management**
-  **Executive Search**
-  **Professional Development**
-  **Legal Services**
-  **Human Resource Support Services**
-  **Research and Development**

***Supporting School Districts as
High-Performance Organizations***

**28 Lord Road
Marlborough, MA 01752
Phone: (508) 481-9444
www.nesdec.org**

Member:



NSDC

National School Development Council



Classroom Ready

The teaching programs at St. Joseph's University, New York consistently rank among the state's best, and our graduates are highly regarded in districts across our region – and the nation. Learn more at sjny.edu

Ready. Set. Joe's.
Brooklyn • Long Island • Online

**St. Joseph's
University**
NEW YORK



UNLOCK YOUR LEADERSHIP POTENTIAL



Stony Brook University's Educational Leadership (EDL) program provides the practical skills and theory-based knowledge that teachers need to become effective leaders.

With our post-master's graduate certificate, you can:

- Become more marketable by preparing for two certifications (School District and School Building) in one program
- Enjoy the scheduling flexibility afforded by our fully online curriculum
- Learn from scholar-practitioners who are leaders in the field
- Join a wide network of alumni from across New York State

To find out more about the EDL program and how it can propel your career, visit us at stonybrook.edu/edleadership



Stony Brook University



School of Economics &
Business Administration

Earn your MBA in 12-months from anywhere

Kickstart your career in as little as 12 months
with the Saint Mary's College, accelerated
Online MBA program.

Learn to lead with confidence,
apply for FREE today!



AACSB
ACCREDITED

Start Today - No GRE/GMAT Required - www.stmarys.mba



DOCTORAL PROGRAM IN EDUCATION (ED.D.)

*Educational Leadership for
Diverse Learning Communities*

Advocacy for diverse learners with an emphasis on educational equity, social justice and ethical leadership.

Our program formats offer convenience and flexibility:

- **Hybrid track** - a blended combination of both face-to-face and online classes. Face-to-face classes meet five times per semester on Saturdays.
- **Online track** - classes are offered in an asynchronous, online format to accommodate any schedule at any time.



**MOLLOY
UNIVERSITY**

FOR FURTHER INFORMATION CONTACT:

EdD Program Office | eddprogramoffice@molloy.edu
(516)323-3164 | www.molloy.edu/eddprogram



THE SCHOOL OF EDUCATION

Educating the next generation of working professionals
who teach, counsel, lead, and inspire.
Serving Long Island and the New York metropolitan area.

TAKE YOUR CAREER TO THE NEXT LEVEL!



Contact us for more information.

- Doctoral Programs
- Master's Degrees
- Advanced Certificates
- Leadership Credentials

St. John's University
The School of Education
Office of Marketing and Recruitment
718-990-6034
shaws@stjohns.edu



LONG ISLAND UNIVERSITY

College of Education, Information and Technology



Advance your career, share
your passion and inspire
students to love learning.
LIU Post offers education
programs in core areas and
in-demand specialty areas:

LEADER IN EDUCATION

Department of Educational Leadership, Technology and Administration (DELTA)*

- Master of Science in Educational Leadership
- Advanced Certificate in Educational Leadership
- Master of Science in Educational Technology
- Advanced Certificate in School District Business Leader
- Ed.D. in Transformational Leadership

Department of Teaching and Learning

- Master of Science in Childhood/Students with Disabilities (All Grades)
- Master of Science in Early Childhood/Childhood Education
- Master of Science in Adolescence Education (7-12)
- Master of Science Ed./Students with Disabilities (All Grades)
- Master of Science Ed. Literacy All Grades*

Palmer School of Library and Information Science*

- Master of Science in Library and Information Science
- Master of Science in Library and Information Science/School Library Media Specialist
- Advanced Certificate in Archives and Records Management
- Advanced Certificate in Public Library Administration
- Advanced Certificate in Computer Science/Digital Fluency Education
- Ph.D. in Information Studies

Department of Counseling and Development

- Master of Science in School Counseling
- Master of Science in Clinical Mental Health Counseling
- Advanced Certificate in Clinical Mental Health Counseling

* Literacy All Grades MSED and all DELTA & Palmer programs delivered via distance learning.

Apply today to see if you qualify!

Visit liu.edu/post/education or call 516-299-2244

Find us:

Facebook: LIU POST • Instagram: @LIUPOST • X: @LIU POST

Mr. George L. Duffy
Executive Director
SCOPE Education Services
100 Lawrence Avenue
Smithtown, NY 11787



Phone: 631-360-0800
FAX: 631-360-8489
www.scopeonline.us

SCOPE Services include:

- ◇ Child Care-Before and After School Programs, Employee Day Care
- ◇ Pre-K, UPK Classes
- ◇ Enrichment Programs
- ◇ SAT/PSAT/ACT Prep Courses
- ◇ Outdoor Education Programs & Camps
- ◇ Summer Environmental Adventure Program
- ◇ Services for Employment and Certification
- ◇ Conferences
- ◇ Management Services
- ◇ Mediation Services
- ◇ Workshops/Speakers Bureau
- ◇ Professional Development/Inservice Courses
- ◇ Publications:
 - Directory of Suffolk County Public Schools
 - Directory of L.I. Private & Parochial Schools
 - Directory of Mid-Hudson Public Schools
 - Journal for Leadership and Instruction
 - SCOPE Education Forum