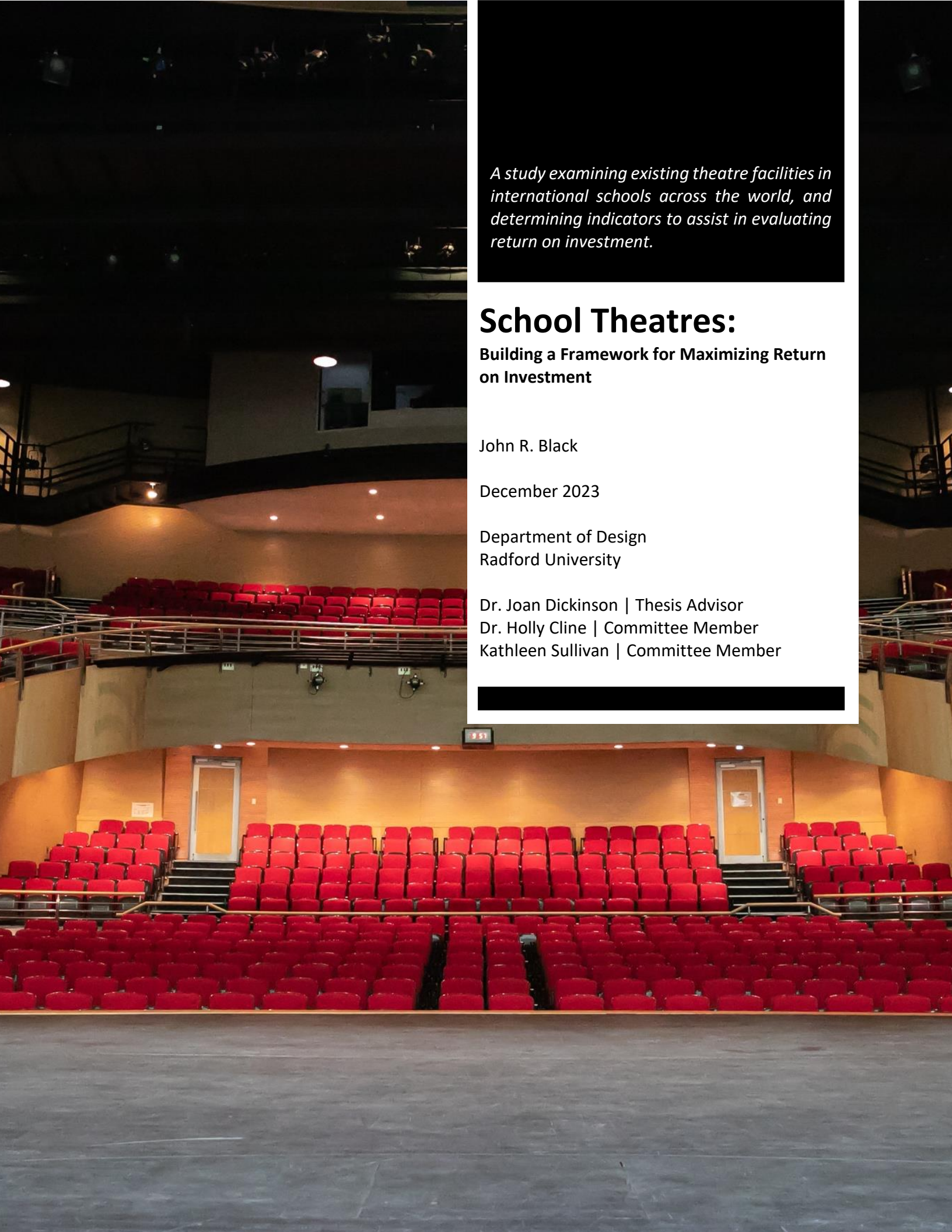


A study examining existing theatre facilities in international schools across the world, and determining indicators to assist in evaluating return on investment.

School Theatres:

Building a Framework for Maximizing Return on Investment

John R. Black

December 2023

Department of Design
Radford University

Dr. Joan Dickinson | Thesis Advisor
Dr. Holly Cline | Committee Member
Kathleen Sullivan | Committee Member

Thesis Committee

Joan Dickinson 11/8/23

Dr. Joan Dickinson, Thesis Advisor — Date

Holly Cline 11/8/23

Dr. Holly Cline, Committee Member — Date

Kathleen Sullivan 11/8/23

Kathleen Sullivan, Committee Member — Date

Abstract

In 1970, Joseph Peluso published *A Survey of the Status of Theatre in United States High Schools*, which was updated by Kent Seidel in 1991 and again in 2012 by Matt Omasta. To date, no such study has been conducted on the 13,000+ international schools operating around the globe. The last several decades has seen hundreds of millions of dollars invested in international school performing arts centers with 700+ seat theatres and state-of-the-art technical equipment.

Furthermore, studies from around the world have examined the challenges and job expectations placed on theatre educators and others working in these state-of-the-art theatre facilities, yet little data exists describing these spaces and why schools are building them.

The first phase of this study surveyed international schools using a questionnaire designed similarly to the studies conducted by Peluso (1970), Seidel (1991), and Omasta (2012). Data was collected and analyzed from 54 (n = 54) participants, showing that while international school theatres are generally much newer than those found in the United States, many of the same challenges and problems are faced by those working in them.

The second and third phases specifically sought to answer the question of how international schools are receiving a good return on their investment in these theatre facilities. Phase 2 included two, asynchronous design thinking activities where eight (n = 8) participants contributed towards a collaborative stakeholder map, as well as an individual activity allowing them to identify what they believed indicated a high return on investment or a low return on investment. The stakeholder map showed that international school theatres serve more than just the performing arts programs and are important spaces for non-performing arts events where students and the community can gather. As there exists many important stakeholder groups, indicators of high and low return on investment were varied. High return on investment

indicators included having theatre staff, being well-equipped, having adequate operational budgets and financial planning, being accessible, and holding drama, music, dance, and other visual and performing arts showcases throughout the year.

The third phase included an in-person design thinking workshop with four (n = 4) participants representing a variety of roles within an international school. Through the use of four design thinking activities, participants produced “portraits” of what it would look like to successfully achieve several of the return-on-investment indicators from Phase 2. Selected indicators chosen by participants included drama productions, scheduling, accessibility and good financial planning.

At the end of this study, a framework template was created to assist schools in going through a step-by-step process in order to identify indicators that are meaningful to their organization, and then map those out in a document that can be used from year to year to assist them with justifying their return on investment. No two schools are the same, and the plan for every school will be different.

Acknowledgements

Thank you to all of my Radford University Design Thinking program professors. Not only have I learned about the field of design thinking through your instruction, but I have been encouraged to apply and practice it in all areas of my life, which has made me a better student, employee, manager, and person.

My deepest thanks to my thesis advisor, Dr. Joan Dickinson, as well as my committee members, Dr. Holly Cline and Kathleen Sullivan. Thank you for your guidance through the thesis process, the many edits, the encouragement, and your unending flexibility as you provided guidance literally from the other side of the world.

Thank you to my wife and children who have encouraged me and endured the last five years that I have been pursuing this program. Thank you for your love, support and prayers through the late nights, work weekends, and time that I have spent on this program. I love you all more than words could say.

Last, and most importantly, I thank and dedicate this project to God. My journey in academic theatre began when discovering my passion while attending an international elementary school, and since then I have striven endlessly towards excellence not only professionally, but in my support and service to others working in the theatres that I manage. May this shed light on this field, provide hope and positive outcomes in international schools around the world, and bring You glory!

Table of Contents

List of Figures

List of Tables

In 1970, Joseph Peluso published *A Survey of the Status of Theatre in United States High Schools*, considered to be one of the first and most comprehensive reports describing high school theatre education in the United States. Commissioned by the U.S. Department of Health, Education, and Welfare, Peluso's questionnaire collected and analyzed data covering topics including theatre as an academic subject, theatrical productions mounted, theatre teacher demographics and qualifications, and facilities available for theatre activities among others.

Twenty years later, the Educational Theatre Association conducted the survey again, authored by Kent Seidel, describing and examining the status of theatre education in United States high schools in 1991. Based upon Peluso's questionnaire, this new report provided the first opportunity to analyze changes, both positive and negative, in theatre education during the previous 20 years. While there were many improvements in theatre education, Seidel (1991) found that school performance facilities were still less than adequate, although there had been some improvements since Peluso's initial report. Performance facilities at schools included stages specifically built for theatre, general purpose auditoriums, cafetoriums, gymtoriums, black box theatres, and other non-theatrical spaces, most averaging over 28 years of age (Seidel, 1991).

Seidel's 1991 report also expanded beyond simply asking respondents about available facilities by digging deeper into the use of performance environments and the quality in which they were equipped. He found that for those schools that had a dedicated theatre space, the quality of that space was quite low, even if well-equipped, and access was difficult or limited, with an average of 80 percent of respondents indicating that the space was used by non-theatre related groups for more than 15 days each month.

Roughly 10 years later, a third survey was organized by the Educational Theatre Association and Utah State University authored by Matt Omasta. Omasta (2012) built upon the

studies conducted by Peluso (1970) and Seidel (1991) and provided yet again another opportunity to analyze changes in high school theatre education in the United States. Findings indicated that there were improvements in schools: performance facilities were either standard theatre stages or general auditoriums, with decreases in the use of cafetoriums, gymtoriums, or other non-theatre spaces (Omasta, 2012). Like the 1991 study, however, performance facilities were aged, with half of respondents indicating their facility was 30 years old or older, while 80 percent had theatre spaces that were at least 10 years old (Omasta, 2012). Interestingly, Omasta (2012) also noted that 38 percent of schools placed the primary responsibility for managing the performance facilities on the theatre teacher, and 31 percent placed this on school custodians, accounting for over 60 percent of theatre management and operations. Of the respondents, only 13 percent of schools employed technical staff or outside contractors whose primary responsibility was the management and operations of the theatre.

The Peluso (1970), Seidel (1991), and Omasta (2012) studies have provided comprehensive data and discussion on the landscape of theatre education in high schools in the United States, but no such studies can be found examining the landscape of theatre education in international schools. When searching databases provided by Radford University Library, ProQuest, and Google Scholar, nothing was found regarding the state of theatre education in international schools. Additionally, when searching these databases with regard to international school theatre facility operations or management, no relevant studies could be found.

As of February 2023, ISC Research Limited from the United Kingdom, a provider of K-12 international school data and trends, indicated there are over 13,100 international schools across the globe and that the international school market has grown 18% in the last 5 years despite the COVID-19 pandemic (ISC Research, February 2023; ISC Research, August 2023).

While Omasta (2012) found that most respondents indicated school theatres were aged, international schools, particularly in Asia, have been investing in new or renovated state-of-the-art, multi-million-dollar theatre facilities since the early 2000s.

In 2003, Seoul Foreign School opened the Lyso Center for the Performing Arts, featuring a 701-seat main theatre, the largest academic theatre of international schools in South Korea to date. Concordia International School Shanghai opened a center for fine arts in 2007, and in 2011, the Jerudong International School in Brunei opened a new arts center featuring a 725-seat main theatre. In 2015, Singapore American School renovated its 800-seat theatre, installing an active-acoustics system making it one of the most technologically advanced theatres in the world. That same year, Shanghai American School Pudong opened a new performing arts center featuring a 750-seat main theatre. In 2020, the International School of Beijing added to its existing performance spaces by enhancing the new high school and middle school performing arts center as well as a dedicated elementary school arts center with dedicated theatre.

As these state-of-the-art, international school theatres have increased in number around the world, several questions must be asked. For what purposes are international schools investing in multi-million-dollar theatre facility renovations or new builds? What programming and use goals do they have for these theatre spaces? Are they staffing their theatre spaces to achieve these goals and maximize the potential of the facilities? Are international schools spending millions of dollars on theatre spaces as eye-candy marketing tools to help distinguish themselves from competitors in their area? How do they ensure that all stakeholders experience the full benefits that these types of facilities offer? Similarly, how do these schools know whether they are maximizing their return on investment?

While Peluso (1970), Siedel (1991), and Omasta (2012) focused their studies on the United States, most non-U.S. investigations have examined the challenges and job expectations placed on theatre educators, many of whom work in these state-of-the-art facilities (Aris et al., 2019; Gray et al., 2019; Gray et al., 2020; Pascoe & Sallis, 2012; Wright & Gerber, 2004). Very little data exists documenting and discussing such topics as international school theatres and equipment, facility programming, staff demographics and qualifications, operational costs, revenue generating activities, and more in likeness to the United States research.

Therefore, the purpose of this study is two-fold: first, to examine the status of international school theatres through existing theatre facilities available, theatre staff demographics and qualifications, and theatre facility programming; and second, to explore the indicators (both tangible and intangible) that justify return on investment. Design thinking methods will be used to assist in identifying and measuring indicators in order to evaluate international school theatre return on investment.

Definition of Terms

Affinity clustering: a graphic technique for sorting items according to similarity (Luma Institute, 2012).

Cafetorium: a school physical plant combining a cafeteria and auditorium.

Creative matrix: a format for sparking new ideas at the intersections of distinct categories (Luma Institute, 2012).

Critique: a forum for people to give and receive constructive feedback (Luma Institute, 2012).

Gymtorium: a school physical plant combining a gymnasium and auditorium.

Host country: the country in which an international school operates.

International school: a school operating in a country whose primary clientele are expatriates and not naturalized citizens of that country. May include students from Kindergarten through High School Grade 12 and the language of instruction is not the host country's language. Annual budget for school operations is predominantly funded through students' tuition.

Multi-million-dollar theatre: a school theatre facility in which total value of all lighting, audio, video, stage machinery, and furniture exceed $1 million USD. This does not take into consideration the cost of the building construction itself, but only the fixtures, furnishings, and equipment.

Production design: the act of designing technical and staging elements of a drama performance. Also includes the actual work of preparing, constructing, and programming these designs in preparation for a performance.

Return on investment (ROI): a metric comparing how much was paid for an investment and how much was earned to evaluate its efficiency; a measurement of profitability (Birken, 2022). For the purposes of this study, ROI will be defined as to what extent the theatre space(s) is meeting the

goals/purposes for which it was/will be designed or built and includes both financial and social returns; a measure of alignment

Round robin: an activity in which ideas evolve as they are passed from person to person (Luma Institute, 2012).

Social Return on Investment (SROI): a process and method to understand how certain activities can generate value, and importantly, a way to estimate that value in monetary terms (Zappala et al., 2009); expressing the monetary value of intangible returns

Stakeholder mapping: a way of diagramming the network of people who have a stake in a given system (Luma Institute, 2012).

Theatre consultant: a professional advisor who provides guidance and support to owners and design teams on the planning, design, and equipping of theatres, concert halls, and other types of facilities used for public assembly or presentation (American Society of Theatre Consultants, 2022).

Theatre programming: all of the events and activities held in the theatre space itself, regardless of department, art form, audience, or purpose.

Technical support: the act of providing lighting, audio, video and/or stage setup support for an event in a school theatre facility. Includes support for drama productions, music concerts, student assemblies, public presentations, etc.

Theatre facility management: coordination and oversight over theatre facility scheduling, budgeting, staff scheduling, and either recommends or approves needed repairs, updates, and replacements of fixtures, furniture, and equipment.

Visualize the vote: a quick poll of collaborators to reveal preferences and opinions (Luma Institute 2012).

What's on your radar: an exercise in which people plot items according to personal significance (Luma Institute, 2012).

Literature Review

Theatre in education has been a topic of study for many years. Perhaps the most found topics when researching theatre in education lies in the arguments for and importance of arts education in the development of students, as well as studies into how the arts can be integrated into the instruction of non-arts subject content (Gray et al., 2018). Studies examining the state of theatre programs and theatre facilities have largely been missing from recent academic research, with the Peluso (1970), Seidel (1991), and Omasta (2012) investigations providing the most descriptive data as to the state of the academic theatre at the time of each study. But when did theatre stages show up in K-12 education and were they built for the express purpose of staging theatrical productions?

In 1966, the National Association of Drama Advisors published a booklet titled *The Design of Drama Spaces in Secondary Schools*, in which the design and functional requirements for theatre facilities in secondary schools was explicitly described. The booklet's forward message clearly states its intention: "Above all, drama requires spaces of its own, designed for the purpose and not to be shared with a multitude of other interests" (Strand Electric, 1966). Details are provided not only for drama classrooms, but also performance areas and include topics such as the structure of the acting and audience areas, seating, lighting, curtains, storage, dressing rooms, and more (Strand Electric, 1966).

It may be that this booklet was written to address documentation of issues surrounding performance spaces in studies prior to and during its time, evidenced through a number of writings during the 1950s and 60s. Regarding colleges and universities in the 1950s, Robinson (1951) wrote that while most had some kind of space in which to present a play, very few were satisfactory to those who actually used the spaces. Her study surveyed 100 university theatre

workers about the shortcomings of the theatres in which they worked. Seventy (n = 70) people responded to the survey, representing 70 individual theatres/schools, and consisted of theatre directors, producers, and technicians. They noted the importance that function plays in building an educational theatre, stating that the theatre space should be designed first and foremost as a theatre, rather than a catch-all space for all of the activities of the school (Robinson, 1951). Shortcomings included issues such as the auditorium furnishings, quantity of storage and preparation spaces, auditorium acoustics, multiple issues with the stage itself, and the lighting systems installed. She also wrote that these theatre spaces should be protected from use by other activities, quoting a respondent that "what it does to the people who must work in such a building shouldn't happen to human beings" (Robinson, 1951). It is important to note that Robinson's 1951 survey targeted 100 academic theatres known for producing good theatre, showing that mistakes made in the construction of theatres was not limited to those with smaller programs or fewer financial resources, but rather a misunderstanding regarding the actual needs of a theatre physical plant.

About a decade later, the *Educational Theatre Journal* published an article focusing on educational theatre facilities in secondary schools. Addressing schools in the United States, Robinson (1964) noted that schools seldom provide adequate spaces for teaching drama, even if the subject itself is valued and a part of the curriculum. His writing proposed ideal solutions to physical plant problems, reasons that these solutions typically failed, and ways in which these challenges could be avoided. Like Robinson (1951), Robinson (1964) expressed the challenge of a multi-use space but did not explicitly discourage multi-use so long as the form and equipping of the space supports the theatrical purposes. In fact, he offered that "it is much easier to develop

cubage specifically for theatrical use and adjust to other purposes than it is to create a general-purpose room which on occasion may be used as a theatre" (Robinson, 1964).

This begs the question, where was educational theatre being performed? What prompted Robinson (1951) and Robinson (1964) to look specifically at the physical plant needs and limitations? Robinson (1964) provided insights into the multi-use spaces that were commonly found in secondary schools around and prior to his writing, namely the gymtorium and cafetorium. Both types of spaces were commonly found in secondary schools, most likely due to the fact that a large physical space was needed for performance as well as other functions at schools.

Gymtoriums provided athletic and performance activities, both of which required a large quantity of open space. Athletics and performance, however, are quite different, and Robinson (1964) stated that neither activity benefited from this arrangement. Seating layout, flooring materials, access time, ceiling heights, lighting requirements, window placement for natural light and fresh air, and dressing room facilities are some of the areas addressed as having opposite needs between athletics and performance (Robinson, 1964). Athletics often requires seating around a playing area in the middle of the space, whereas performances often need seating on one side facing a performance area. Though this can be achieved using portable seating, sharing a gymtorium often means a flat floor surface built for athletic purposes. Row upon row of flat seating makes it difficult to see performers, and these floors often create acoustical challenges. Adding to poor acoustics are the high ceilings needed in athletics facilities to prevent balls from hitting lighting fixtures and ceiling materials. Both disciplines require extensive time for practices and rehearsals, so coaches and directors are often at odds regarding access to the space.

These are but a few of the challenges posed by gymtoriums described by Robinson (1964) that can still be found in secondary schools in the United States according to Omasta (2012).

More commonly found in primary schools (though also appearing in secondary schools), cafetoriums functioned as dining facilities and performance spaces. Many of the issues faced in gymtoriums exist in cafetoriums as well, with the exception that access time requirements had fewer conflicts than between athletics and performance (Robinson, 1964). Meals times were predictable, and outside of the few hours used for setup/prep, cooking, eating, and cleanup, performance teachers were able to access the cafetorium for rehearsals and running their programs. However, a flat floor, improper floor surface, poor lighting, existence of windows for natural light, and other issues made the cafetorium a less-than-ideal performance space.

In addition to the challenges gymtoriums and cafetoriums presented, Robinson (1964) also shed light on issues faced by schools that did have a dedicated performance space. These included auditoriums that were too large, stages that were too large, inadequate lighting systems, lack of access for rehearsals due to other functions, and minimizing operational costs for items such as heating, cooling, and electrical utilities. All of these issues stem from the fact that the performance area was shared for other functions and programs with large space requirements. For the drama program, however, the result was too few performances due to too many seats in the auditorium, actors and settings looking miniscule and lost on a large stage, holding rehearsals at irregular times due to other events, and an unwillingness to operate utilities for irregular rehearsals involving a small number of participants. As such, Robinson (1964) suggested the ideal situation for educational theatre in secondary schools: a purpose-built theatre with an auditorium seating 400 to 600 people with a rehearsal/curricular space adjacent able to be used

independently, but not simultaneously, both able to support lecture, rehearsal, and performance activities.

Six years after Robinson's (1964) article on educational theatre facilities in secondary schools, the first demographic study painting a picture of theatre education in the United States was published by Joseph Peluso, providing a snapshot of what theatre education looked like in United States secondary schools in 1970. He sent a questionnaire to 3,332 schools representing a good distribution of school size, geographic location, and method of funding. Completed questionnaires from 1,606 schools were received, of which Peluso used 1,352 in order to ensure fair representation across the size, location, and funding factors. The questionnaire had two portions, one to be completed by a school principal or other administrator, and one to be completed by the teacher most responsible for the theatre and dramatic arts. With regards to the physical plant, Peluso found that 43% of respondents produced play or musical performances in a multi-purpose auditorium, followed next by 34% produced in a gymtorium, while only 7.5% produced plays or musicals in a cafetorium space.

Around two decades later, a follow-up study on educational theatre in secondary schools in the United States was conducted by Kent Seidel. Much of the procedure was duplicated from Peluso's 1970 study in order to make data comparisons about improvements or setbacks in theatre education, though he did expand the study to include areas of interest that Peluso had not measured. The study used a sample of 1,514 schools selected at random from 14,492 schools and tested against size, geographic location, and school type (rural, suburban, and urban) to ensure a representative sample. The survey again had two portions, one for a school principal or administrator, and one for a teacher most directly responsible for theatre activity. Responses

were received from 36% of schools, which were then checked to ensure representative distribution on the three factors.

Seidel (1991) found that, on average, theatre facilities were much improved. He discovered that the average school had one regular performance space, and 27% stated they had two. As to the types of performance spaces, about 50% had a space built specifically for theatre, 33% a general-purpose auditorium, 8% a cafetorium, 3% a black box theatre, and the other 10% had some other type of performance space. Seating capacity ranged from 30 to over 2,000, with most averaging in the mid-500's; yet Seidel determined that over 60% were not considered well equipped, 80% indicated having to share the space with other programs or activities, and the average age of a high schools' theatre facility was 28.5 years, though that increases to 40-years for the 25% of respondents that stated their theatre had undergone a renovation in the last decade (Seidel, 1991).

In 2012, Omasta built upon Peluso's (1970) initial study and Seidel's (1991) investigation while also adding to the breadth of data collected. Omasta used a census methodology, inviting around 13,000 schools to participate, of which about 10% participated (just over 1,200 schools), which he emphasized does not necessarily represent all of the theatre programs in U.S. high schools. At the time the study was published, he did note that continuing analysis was underway to provide more clarity on many of the variables related to the study. Like Peluso (1970) and Seidel (1991), Omasta's survey asked questions of high school administrators as well as theatre educators.

It is interesting to note that, even four decades after the initial study, discrepancies between the type and quality of performance facilities remained quite high. Of the respondents, about 45% reported producing plays and musicals on a standard theatre stage, with 33% using a

general-purpose auditorium, 12% using a cafetorium, 4% using a black box theatre, and 7% using some other type of space. Roughly 41% of these seated between 500-999 people with 9% seating 1,000 or more. Like the studies conducted by Peluso (1970) and Seidel (1991), most respondents reported less than ideal quality of facilities, predominantly due to age of the spaces. Of the respondents, over 50% reported that their performance spaces were at least 30 years old. Despite this, Omasta (2012) stated that it seemed most schools were able to invest in newer technologies, particularly in sound and lighting, though were lacking in physical space resources such as scene shops, box offices, costume shops, orchestra pits, fly galleries, or storage facilities.

Unlike the previous two studies, Omasta (2012) also described that the primary responsibility for managing the performance space existed with theatre teachers (38%) or school custodians (31%). Though less documented in the United States, the challenges faced by theatre educators managing and operating theatre facilities is reported in other countries (Aris et al., 2019; Davey, 2010; Pyfrom, 2015; Gray et al., 2019; Gray et al., 2020; Pascoe & Sallis, 2012; Wright & Gerber, 2004). Theatre educators are often expected to perform production design, technical support, and administrative tasks related to operating a theatre facility on top of their instructional duties (Aris et al., 2019; Davey, 2010; Pyfrom, 2015; Gray et al., 2020). Not only is this problematic due to the added workload placed on theatre educators, it also does not necessarily consider the educational background or training of these individuals performing these tasks. In her doctoral thesis titled *Musical Theatre in Secondary Education: Teacher Preparation, Responsibilities, and Attitudes*, Davey (2010) sent a questionnaire to 417 secondary music teachers in the state of Arizona and received 225 respondents that met the requirements of her study, part of which looked at teacher preparation for putting on musical theatre productions in high schools. Findings indicated that the majority of educators involved in putting on a high

school musical production reported that they simply learned what they needed to as they went through the production process (Davey, 2010).

Operating theatre facilities and specialized production equipment requires specific skills and training not only to fully realize the potential of these resources, but to also minimize associated safety risks. In his master's thesis titled *Theatre Safety in Louisiana Secondary Schools: A Survey Study*, Pyfrom (2015) discussed the risks that exist in theatre facilities, including, but not limited to electrical shock, falling from heights, falling objects, exposure to hazardous materials in paints, adhesives, and other chemicals, as well as operational hazards working with tools and stage machinery. In professional theatre, directing and acting, scenic design, structural engineering and scenic construction, lighting design and technology, sound design and technology, costume design and construction, and theatre management all are specialized, staffed departments, many with specific university degree concentrations available; yet teachers in primary and secondary schools are often expected to perform all of these roles, in addition to a teaching load (Davey, 2010; Pyfrom, 2015).

Not only are there specialized roles in professional theatre that educators, custodians, and others are expected to fill in the school setting, there are also specific architectural and equipment features unique to theatrical facilities requiring focused operation, maintenance, and training. Risk of falls increases when orchestra pits are installed, the areas where musicians will play from during a school musical. Scenery, lights, curtains, and other equipment, often weighing hundreds of pounds, are suspending over actors' heads in fly lofts, the area directly above the stage, consisting of pipes that move up and down either manually or mechanically with counterweights or winches, increasing the risk of something falling. Lighting fixtures are often hung at height in catwalks, above the audience, or on pipes requiring the use of ladders to adjust

when necessary. In addition to the safety risks discussed by Pyfrom (2015), these operators must also have the technical knowledge to program digital lighting control boards, digital audio boards, understand signal networking between the various areas of the physical space, know how to mix and balance large quantities of microphones on performers, as well as construction methods for building stage sets that are structurally safe for actors to move, stand on, and use while also being aesthetically pleasing.

Addressing these specialized skills and knowledge, and in an effort to shed light on the design and function of educational theatre facilities, Rand (2015) published *High School Theatre Operations for Architects, Administrators and Academics*. She specifically writes to architects, educational facility planners, theatre consultants, school superintendents, principals, human resources directors, performing arts teachers and directors, school custodians, university theatre students, and other arts employers among others, addressing each stakeholder specifically to provide insight into how an educational theatre operates (Rand, 2015). She strongly advocated for the value of a trained theatre manager in order to fulfill specialized administrative and operational duties including facility scheduling, production management, safety and liability officer, employee management (paid and volunteer), student trainer, administrative record keeping, policy and procedure writing and enforcement, budgeting and finance, providing technical support, equipment maintenance and procurement, program marketing and outreach, and future strategic planning. Underneath a theatre manager, Rand suggested that trained technicians be employed with specialized technical knowledge of lighting, sound, and theatre production experience and education. Whereas Omasta (2012) shed light on the status of who supported secondary school theatres at the time of the study, Rand's (2015) book specifically addressed those shortcomings and advocated for specific improvements.

While the research by Peluso (1970), Seidel (1991), and Omasta (2012) provide insightful data to guide the future of educational theatre in the United States, no studies have been found addressing international schools around the world. According to ISC Research Limited, a UK provider of K-12 international school's data and trends, there exists over 13,000 international schools across the globe, educating over 5.8 million students (*Home*, 2022). Despite the COVID-19 pandemic, the international school market is strong, with new schools continuing to open (*Home,* 2022). While historical data on the types of spaces being used for performances may not exist, many international schools, particularly in Asia, have invested in multi-million-dollar theatre facilities in recent decades.

In 1996, Singapore American School opened its Woodlands campus with an impressive performance auditorium, which after complete renovation in 2015, can seat over 800 audience members in one of the most technologically advanced school theatres in the world (Meyer Sound, 2016; Spier, 2015). In 2003, Seoul Foreign School opened the Lyso Center for the Performing Arts housing its flagship 701 seat Mainstage Theatre, the largest academic theatre of international schools in South Korea to date. Shanghai American School Pudong, Shanghai American School Puxi, the American International School of Guangzhou, the International School of Beijing, Taipei American School, and many others have built multi-million-dollar theatre facilities, with many future theatre facilities being planned as part of new builds or renovations.

In 1968, Alvin Reiss published *Who Builds Theatres and Why?* in an issue of *The Drama Review*. His piece discussed the increase in construction of new theatres and art centers during the 1960's in the United States, many at colleges and universities as a part of the Higher

Education Act in 1965 (Reiss, 1968). Reiss points at a number of problems prevalent during this time, including:

- Building before determining the user
- Building prior to establishing any program
- Facility use priorities are unrealistic
- Promises made to potential users and then broken
- Facility users having no role in design and planning, choice of architect, or consultants
- Completed structure not compatible with the user needs
- Consultants denied access to the users
- Personal and arbitrary motivations shape the design of the structure (Reiss, 1968)

College and university theatre facilities in the United States were not immune to these problems, even though the average project cost per facility at the time of the study was around $5.5 million (Reiss, 1968).

When searching ProQuest, Google Scholar, ERIC, and Radford University library databases, similar key terms appearing in the studies mentioned above did not reveal investigations on educational theatre facilities internationally, with very few recent studies appearing for schools in the United States as mentioned above. What if the research of the past held true today in international schools? Are the problems experienced and documented in U.S. studies still problems that international theatre educators deal with? Or worse, are those same mistakes still being made due to a misunderstanding of the value and investment theatre spaces present?

While there remain gaps in the literature regarding international schools and the theatre spaces that exist and are being built, Robinson (1951) revealed a truth that crosses international boundaries and time itself: “since theatre architecture is the most costly and permanent of all the arts, it is vitally important that the large capital involved in these future buildings be wisely invested, for it is usually expensive when it is not impossible to correct mistakes” (p. 249). It is therefore important to look at return on investment and to understand what that means in the international school context. If international schools are spending large amounts of money on building theatre facilities, how do they know if they are receiving a good return once millions have been spent on the facilities and equipment?

Return on investment (ROI) can be expressed as a ratio between an investment made (cost) and the return (benefit) on that investment and is widely used to determine or evaluate the effectiveness or efficiency of an investment (Fernando, 2022). For example, a small business owner may be interested in determining whether or not money spent on a particular advertising campaign was worth it. They would be able to take the amount spent on the advertising campaign (cost) and divide that by the amount of sales generated (benefit) to determine their return on that investment. This type of ROI calculation is simple and widely used when considering tangible products and services, but it is not without its limitations. External factors that may influence the benefits derived from an investment are not considered, such as the passage of and influence of time, market changes, changes inside the business, etc. In addition to external factors, return on investment calculations are also limited in that they mostly focus on tangible goods and services. In education, regardless of whether a school operates as for-profit, nonprofit, or not-for-profit, the benefits or outcomes from investments made are most often

intangible. How then can schools know whether investments made in facilities or programs offered are or were worth the initial investment and can that be measured?

Studies looking at the return on investment in education have been conducted for a number of decades, though many focus on education measuring future benefits that may be derived such as improved job prospects, earning higher wages, future educational outlook for the student and their descendants, or the economic benefits experienced from an educated workforce (Hazard, 1978; Jensen, 2010; Psacharopoulos, 1972; Sani, 2013). But what about measuring the returns from building an educational theatre facility? In commercial building projects, particularly in situations where the motivation for development is profit-driven, the finished building is often measured and evaluated according to how the building itself performs against the project cost (Watson et al., 2016). While building performance certainly is important in education projects, to focus solely on post-occupancy building performance would only tell a piece of the story and would not capture the total value received. Surely there are intangible benefits to an educational theatre that bring value to the school, its students, parents, and the local community, but how can that be captured such that school administrators know whether they are receiving maximum value?

In the late 1990's, Jed Emerson and the Roberts Enterprise Development Fund (REDF) sought to build a working framework for capturing intangible investment returns. Particularly in the nonprofit sector, businesses felt that their work was under-valued and lacked any objective method for collecting data, measuring, evaluating, and communicating their value to investors (Emerson, 2000). Known as social return on investment (SROI), monetary value is assigned to social returns which are then compared against investments made, similar to cost-benefit analysis and traditional return on investment calculations (Watson et al., 2016). SROI's strength is its

ability to communicate the value of intangible outcomes identified by stakeholders on a case-by-case basis, which means that the methodology is extremely flexible and can be applied to a diverse range of business sectors (Watson et al., 2016; Zappala & Lyons, 2009). Though Emerson's method is considered the pioneer of SROI calculation frameworks, several approaches are in use, though all utilize economic language and metrics-based thinking to assess the social impact of organizations (Cooney & Cerullo, 2014).

Determining the social value of organizations can be considered an application of design thinking whether or not the term "design thinking" is actually used. While there is no single definition for design thinking, at its core, it is a human-centered approach to problem-solving and innovation that prioritizes people. It seeks to understand the experiences and needs of real people in whatever context it is being applied. In this way, SROI can be considered an application of design thinking in that its goal is to measure, evaluate, and understand the social (human) value returned on investments.

The application of SROI has steadily been increasing in recent years. Watson, Evans, Karvonen, and Whitley (2016) applied the SROI methodology to determining the social value of buildings, specifically focusing their study on the internal users of cancer support centers in order to promote an understanding of the impact of building design on users. Jackson and McManus (2019) applied the SROI methodology to measure the social impact of the Turner Contemporary Art Gallery. More recently, Davies, Taylor, Ramchandani, and Christy (2021) applied the SROI methodology to measure and provide evidence for the impact of 12 community sport and leisure facilities in the UK. Their study was actually driven by the Public Services (Social Value) Act 2012 in the UK requiring social value to be evaluated in the process of awarding public funding for projects (*Public Services*, 2012; *Social Value*, 2021).

While increasing examples of the application of the SROI methodology exist in various industries, the literature lacks any studies applying social value measurement or analysis regarding educational theatre facilities. Surely the application of SROI methodologies and an understanding of the social return on investment would assist school administrators in making decisions when building theatre facilities, as well as understanding the full story of the impact of theatre facilities post-occupancy.

Therefore, the purpose of this study is two-fold: first, to examine the status of international school theatres through existing theatre facilities available, theatre staff demographics and qualifications, and theatre facility programming; and second, to explore the indicators (both tangible and intangible) that justify return on investment. Design thinking methods will be used to assist in identifying and measuring indicators and evaluating international school theatre return-on-investment.

Methods

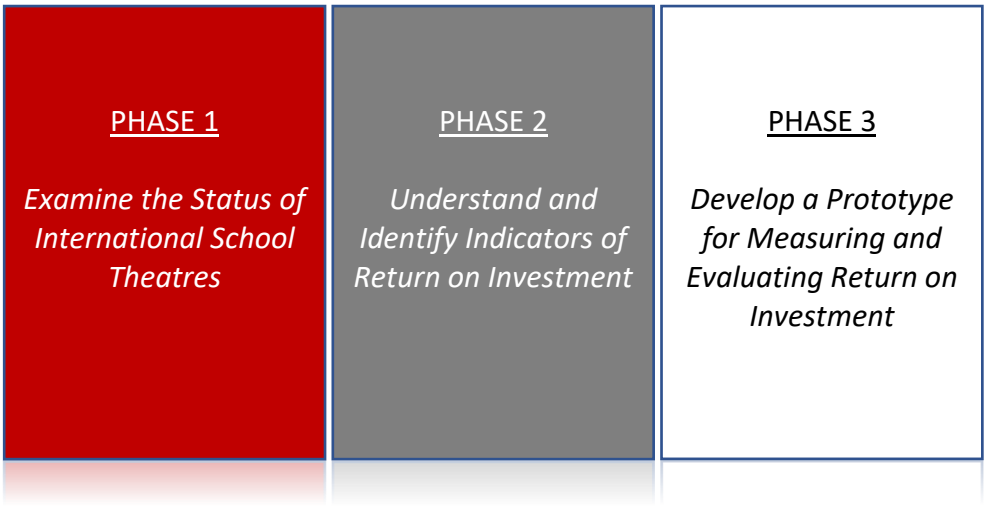


Figure 1: Study Overview

Study Overview

The research for this study was conducted over the course of three phases and used survey design and design thinking methods. The first phase addressed the first purpose of this study, which is to examine the status of international school theatres. This phase provided insight into the characteristics of theatre spaces that have been built in international schools, as well as how they are equipped, how they are operated and managed, the programming that they support, and more. Phases 2 and 3 addressed the second purpose of this study. Phase 2 looked specifically at understanding and identifying indicators of return on investment. Indicators included tangible or intangible qualities that aligned with the intended purpose or goals for the theatre spaces. Phase 3 then included a face-to-face design thinking workshop, leading toward the development of a prototype for measuring and evaluating return on investment against the indicators from Phase 2. The goal for the tool was to measure alignment between a schools' theatre usage and its purpose as defined by its ROI indicators, thereby showing whether the school is maximizing the potential of their theatre space(s) (Figure 1).

Figure 2: Overview of Phase 1

Phase 1: Examine the Status of International School Theatres

The first phase of the study examined the status of international school theatre spaces, including but not limited to the quantity and specifications of theatre spaces, how they are equipped, staffing as related to operations and management of theatre spaces, the quantity and scale of programs using the theatre spaces, whether the theatre spaces are revenue-generating, the approximate cost spent on building or renovating the theatre space, annual operating and capital budgets, and more (Figure 2). As such, Phase 1 provided an overview of what theatre spaces international schools currently have, an area that had not been studied before.

Phase 1 used purposive sampling and consisted only of international schools. The sample did not require that schools have a specific type, quantity, or quality of theatre as the purpose for this phase was to examine the status of existing international school theatres. It is important to note that most international schools are tuition-driven and do not receive government funding. Participants in this phase consisted of any school employee who is primarily responsible for the management or operations of the theatre spaces. The official position of participants differed from school to school, but may have included the Chief Financial Officer, Chief Operations Officer, Chief Academic Officer, Facilities Director, Theatre Manager, Activities Director, IT Director, among others. The goal was to recruit one school employee who is the most knowledgeable about the existing theatre space(s) at the school. Positions held by participants was not collected.

The primary instrument used for Phase 1 was an electronic questionnaire developed on Qualtrics based on the existing surveys from Peluso (1970), Seidel (1991), and Omasta (2012), as well as Davey's (2010) doctoral thesis and other questionnaires used in studies conducted in the United States (Pyfrom, 2015; Omasta, 2012; Davey, 2010; Seidel, 1991; Peluso, 1970). The questionnaire consisted primarily of closed-ended questions and collected quantitative data that provided an overview of the status of theatre spaces in international schools. There was one single open-ended question at the end of the questionnaire regarding the participants' perception of whether their school maximized their return on investment in their theatre space or not, and why (see Appendix B).

The student researcher recruited participants by taking advantage of school directories published by international school organizations, including the East Asia Regional Council of Schools (EARCOS), Near East South Asia Council of Overseas Schools (NESA), American International Schools in the Americas (AMISA), Association of International Schools in Africa (AISA), Central and Eastern European Schools Association (CEESA), Mediterranean Association of International Schools (MAIS), Tri-Association, and The Federation of British International Schools in Asia (FOBISIA). In total, 677 international schools were identified. The student researcher then contacted each school through either the email provided on the organizations director or the email address listed on the schools' website homepage (see Appendix C). The recruitment email included an introduction to the study, an invitation to participate, a description of who should complete the questionnaire, and the direct link to the electronic questionnaire.

The first page of the survey included a cover letter for internet research, provided information about the study, and asked the participant to provide electronic consent (see

Appendix A). Consent was provided by clicking a button at the bottom of the cover letter, after which the participant was directed to the next page of the survey. If consent was not given, the participant was asked to close the browser window and leave the survey.

The electronic questionnaire was available for participants to complete for two weeks once the email was sent to the schools. The questionnaire took fifteen to twenty minutes, assuming that the participant was knowledgeable about the schools' theatre space(s) and their use.

All questionnaire data was received by Qualtrics. There was no identifiable information collected about the individual participants or individual schools as the goal was not to identify those international schools who do or do not have certain resources, but rather to understand what theatre facilities exist around the world in international schools. The questionnaire data was analyzed within Qualtrics using the built-in analysis tools. The open-ended question responses were analyzed using affinity clustering to sort information according to similarity and to identify common themes.

After analyzing the data from the questionnaire, it was presented graphically in the form of a Google website[1] to allow others to view the findings of the data gathered through the electronic questionnaire. The responses to the open-ended question were presented at the beginning of the design thinking workshop during Phase 3.

[1] https://bit.ly/thesis-schooltheatres

Figure 3: Phase 2 Overview

Phase 2: Understand and identify indicators of return on investment

The second phase of the study sought to understand and identify indicators of return on investment (Figure 3). Indicators may also be thought of as the motives that international schools may have to spend millions of dollars to build or renovate theatre spaces. Through examining and identifying indicators of return on investment, it may be possible to understand why international schools have already or will be building theatre spaces and what their intended purpose is or will be. Indicators may be tangible or intangible and should encompass all possible returns whether they are financial or other. The goal for Phase 2 was simply to identify possible indicators that international schools could use for measuring alignment and not to consider how they might be measured, as that was the goal for Phase 3.

The sample for Phase 2 was a convenience sample and consisted of participants who currently work in international schools. Like the Peluso (1970), Seidel (1991), and Omasta (2012) studies, Phase 2 sought two participants from each school, consisting of an administrator as well as the employee with the primary operational or managerial responsibilities for the theatre facilities. As the student researcher resides in the Asia Pacific region, participants were recruited from international schools in the Asia Pacific Activities Conference (APAC), the Korean American Interscholastic Activities Conference (KAIAC), and the Interscholastic Associate of Southeast Asian Schools (IASAS), all of which have member schools with multi-

million-dollar theatre facilities. Phase 2 was conducted virtually and asynchronously using the Google platform.

There were two design thinking methods used as instruments during Phase 2. The first instrument was a Stakeholder Map. When investing in a theatre space in an international school, it is important to understand who the stakeholders are in the project. These stakeholders may share many of the same goals or purposes for a theatre space, but they may also have objectives of their own depending on their role in the international school and/or the program that they are a part of. Therefore, a stakeholder map was collaboratively created to identify and understand all the individuals concerned with the return on investment of the school theatre space (see Appendix D). Google Slides was used to create the Stakeholder Map. The first slide included the instrument instructions, and the second slide was used as a collaborative workspace for creating the stakeholder map.

The second instrument used was the What's on Your Radar design thinking method that is traditionally used for people to plot items according to personal significance. For this study, this exercise was adapted for use in collecting indicators of return on investment. The three rings of the radar diagram represented a high-, middle- and low- return on investment. The radar diagram was divided into six slices, each focusing on a particular aspect of return on investment: program, people, finances, features, policies and procedures, and other. Program referred to the types of events and ways in which the theatre space is used. People signified all possible users of the theatre space, including staff, students, faculty, parents, and others. Finances examined how the facility is financially supported, such as revenue streams, budget allocations, and expense planning. Features denoted the systems installed in the theatre facility such as fly space, orchestra pit, seating capacity, production support areas available, etc. Policies and procedures

included aspects of safety, operations, maintenance, scheduling, etc. Other provided an opportunity for participants to plot any other indicators that they felt were important but not covered by the other slices of the diagram. Participants then plotted, in their opinion according to their position as a stakeholder, what indicators of a high-, middle- and low- return on investment would look like for each category (see Appendix E). A high return on investment would include any indicators that show a high level of alignment with meeting the goals/purposes for which the facility was built, perhaps a certain level of support staffing, a certain quantity of events, etc. A low return on investment would include any indicators that show a low level of alignment with meeting the goals/purposes for which the facility was built, perhaps limited seating for school gatherings, lack of equipment or supplies, etc.

Phase 2 began with a recruitment email to APAC, KAIAC, and IASAS international schools (see Appendix F). For those schools that listed employees on their websites with email addresses, the recruitment email was sent directly to those employees. For schools that did not list their employees on their websites, the recruitment email was sent to the schools' human resources (HR) department to be forwarded to an administrator as well as the individual with most responsibility for the theatre space(s). The recruitment email described the nature of the study along with an introduction to the procedures and instruments for Phase 2. A link was provided for participants to follow and provide consent through a Google Form (see Appendix G).

If consent was provided, participants were sent an individual email with the links to the two instruments used during Phase 2 of the study (see Appendix H). It was important that participants receive individualized emails as the second instrument was completed individually. The email also restated the timeline for completing both instruments.

The first link directed the participant to the first instrument to be completed, which was the Stakeholder Map. The purpose of this exercise was to understand the scope of individuals and their relationships to each other and the theatre space itself. This instrument was assembled using Google Slides as the collaborative workspace. Participants did not need to be logged into any account to access the instrument, and it was only available to those with the direct link. All participants worked on the same Google Slides file, and the work was completed asynchronously. The first slide included directions for creating the stakeholder map, while the second slide was used for collecting the stakeholders.

The second link directed participants to the second instrument to be completed, which was What's on Your Radar through Google Slides. The first slide included specific instructions for participants to follow as well as a description of the categories used in the activity. The second slide had the radar diagram, along with some sample digital sticky-notes that the participant could copy-and-paste when completing the activity. As the participant completed the diagram individually, this link was unique for each participant. The file itself did not require the participant to log into a Google account so identifiable information was not collected.

Participants were asked to complete all activities within 10 days from the time that the email was sent. Links remained active during that period so that participants were able to return to both activities as many times as they liked. Once the allotted time had passed, the student researcher then locked all documents and participants lost access. This allowed the student researcher to analyze the data collected without further updates being made.

To analyze the stakeholder map, the student researcher organized the stakeholders using affinity clustering. In order the analyze the What's On Your Radar diagrams, the student researcher first transferred all stickies to a single, master Radar diagram as received from

participants. Next, the student researcher resized stickies to be uniform, clustered similar indicators together, removed duplicates, and cleaned up the diagram to make it easier to read and understand.

Once both activities had been analyzed and cleaned up, the student researcher added the final graphics to the Google website[2] created at the end of Phase 1 so that others were able to view the outcomes of Phase 2 The combined stakeholder map, as well as the combined Radar diagram were shared with participants at the beginning of the design thinking workshop during Phase 3. This helped set the stage for developing a prototype for measuring and evaluating return on investment.

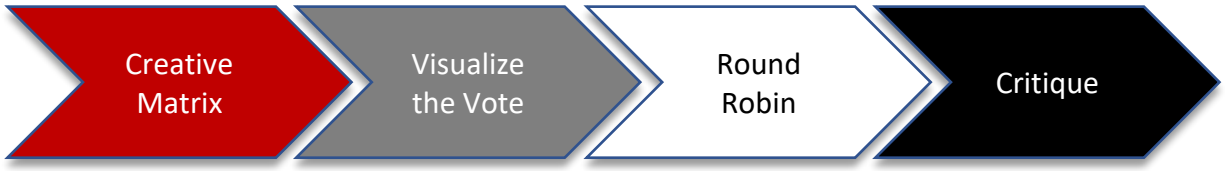


Figure 4: Overview of Phase 3

Phase 3: Develop a prototype for measuring and evaluating return on investment

The third and final phase of the study led to developing a prototype for measuring and evaluating return on investment. Such a tool may be valuable to international schools as it may assist in determining action steps that could be taken to improve return on investment. While Phase 2 was conducted virtually and asynchronously, Phase 3 occurred in a face-to-face design thinking workshop at the international school where the student researcher is employed (Figure 4).

The sample for Phase 3 was again a convenience sample recruited from member schools of the Korean-American Interscholastic Activities Conference (KAIAC) as the student researcher

[2] https://bit.ly/thesis-schooltheatres

resides in South Korea. Participants included any employee of a KAIAC member school existing in the stakeholder map developed during Phase 2. The goal was to include a broad range of perspectives during the design thinking workshop.

There were four design thinking activities conducted during the workshop that acted as the study instruments. The first was a Creative Matrix, a design thinking method used for generating new ideas at the intersection points of distinct categories. For this exercise, columns represented some of the top indicators as determined in Phase 2, while rows represented categories of enablers that were predetermined by the student researcher as they apply to the study. The main goal for the exercise was for participants to generate ideas of how the indicators could be measured or evaluated using the selected enablers. In other words, what would "alignment" for a specific indicator look like in each of the four enabler categories?

The second instrument was Visualize the Vote, a design thinking method during which participants indicated their preferences and opinions on the ideas generated in the Creative Matrix exercise. Participants casted overall votes as well as detailed votes on the ideas generated. This provided direction towards what measurement or evaluative features a prototype should include.

The third instrument was a Round Robin, a design thinking method in which participants passed around a prototype idea from person to person, allowing the idea to evolve as it is rotated. This was used to generate ideas for a prototype that could be used to meet the features that were voted on.

Finally, once the various Round Robin concepts had been shared with the entire participant group, the student researcher then led a Critique to collect positive and negative feedback on each concept. The feedback from the Critique allowed the student researcher to

collect final thoughts, leading towards a prototype for measuring and evaluating indicators of return on investment, which could aid international schools in determining action steps that may be needed to maximize their return on investment.

The participants for Phase 3 were recruited directly through email with an invitation to attend an in-person design thinking workshop at the school where the student researcher works (see Appendix I). The email provided details on the study, the goal for the design thinking workshop, and information about the proposed dates for the workshop. A link to a Google Form was provided so that recipients could express preferences on the workshop date within three days (see Appendix J). Once preferences for the workshop date had been collected, a second email was sent to all respondents confirming the details of the workshop and asked recipients to respond to the email if they intended to participate (see Appendix K). Once confirming the date and participants, the student researcher booked the workshop space at their school of employment (Seoul Foreign School) and prepared all the materials needed for the instruments and activities for the workshop. A Google Calendar invitation was sent to confirmed participants with details of the workshop time and place. Consent was provided upon arrival through scanning a QR code to the electronic consent form using Google Forms (see Appendix L).

The workshop began with a quick overview of what had been accomplished in the study to date. An overview of Phase 1 was provided for context, as well as the process and results of Phase 2. The student researcher then introduced the first exercise, the Creative Matrix, using a large white board laid out with empty indicator headers across the top and enablers listed on the left-hand side (see Appendix M). The enablers were preselected by the student researcher. The participants were first asked to select four indicators to look at from the combined Radar document from Phase 2, which were then added to the column headers on the white board. The

student researcher then passed around sticky notes and writing utensils to the participants and explained the goal of the exercise. Participants were given 15 minutes to write as many ideas as possible on the sticky notes. At the end of the 15 minutes, participants added their sticky notes to the white board at the intersecting cells of each enabler and indicator. Once all of the sticky notes were added to the white board, the student researcher read through all of the ideas.

The second activity was Visualize the Vote. The student researcher distributed two colors of sticky tabs to each participant. One color represented an overall vote and participants received one sticky tab per indicator (four total). The other color represented detail votes and participants received two sticky tabs per indicator (eight total). The student researcher explained how to use the sticky tabs to cast votes on the ideas that were generated. The purpose of this exercise was to determine the metrics to be measured or evaluated against for each indicator. There may be overlapping ideas or duplication, so participants voted to identify the best or clearest idea of "alignment" for each indicator. Participants were given five minutes to vote and add their sticky tabs to the whiteboard. Once the time was up, the student researcher typed on a Microsoft Word document projected for the group the ideas that received the most overall votes and detail votes so that participants could easily focus on those ideas.

Next, the student researcher explained the third activity, the Round Robin. Participants were given a template document on which they completed the activity (see Appendix N). The Round Robin took place over three steps with each step being given five minutes. Each participant was assigned one of the indicators from the creative matrix to start with.

During the first step, participants came up with a statement starter for the indicator being addressed. This was used as the problem statement at the top of the Round Robin worksheet. Participants were then given five minutes to use the provided paper to write or draw a prototype

keeping in mind the ideas that were voted upon for their indicator. Once the time was stopped, participants passed their paper to the next participant. The time began again and this time participants wrote about why the initial idea on the worksheet might fail. Once the time stopped again, participants passed their paper to the next participant. This was the last step of the process, in which participants were given a final five minutes and wrote a way in which the failure identified may be resolved (critique the failure).

Once the time was stopped, the student researcher presented the worksheets to the participant group while conducting a Critique. The critique allowed participants the opportunity to share positive and negative feedback on each idea. The student researcher captured this feedback on sticky notes and attached them to each Round Robin worksheet.

Once the critique was finished, the workshop was complete, and the student researcher thanked the participants for their contributions. The student researcher then took the feedback from the critique and the ideas and used those results towards developing a prototype for measuring and evaluating the four indicators.

Results & Discussion

Data collection from all three phases of the study took place over the course of three months. Results from instruments used during each phase are presented and discussed by phase.

Phase 1: Electronic Questionnaire

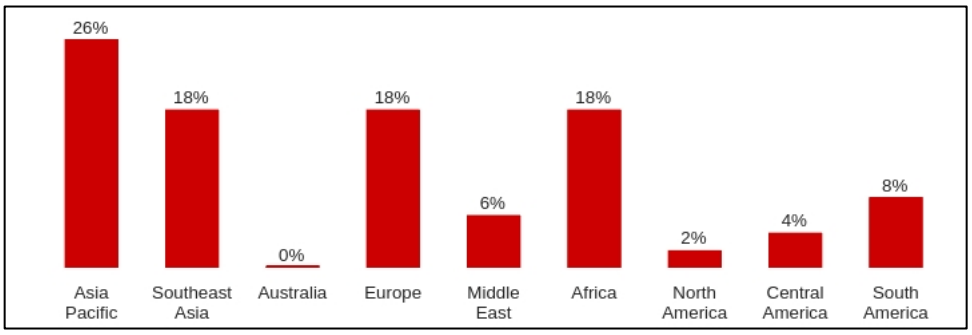


Figure 5: Respondents by Region

The electronic questionnaire was distributed to 677 international schools across the world and received 55 responses, for a response rate of 8.1%. The low response rate to the questionnaire was disappointing and is a limitation to the study. However, it aligns with trends in the U.S. of lowered survey response rates (Rothbaum, 2021) and potentially high levels of faculty burnout at the time the questionnaire was administered (Kush et al., 2022; Westphal et al., 2022; Winfield & Paris, 2021). Responses were received from international schools representing all continents other than Australia (Figure 5). The majority of respondents were schools from the Asian region, accounting for 44% of total responses. Regarding school size, 51% of respondents' schools enroll 501 to 1,500 students, while 37% enroll less than 500 students, and 12% enroll 1,501 to 2,000 students.

When asked to describe the school's performance space(s), the majority of respondents indicated that their school has at least one dedicated theatre space. When comparing the percentage of choice selection, "Dedicated theatre space" accounts for 52.6% of responses (Figure 6). Unlike the Omasta (2012) study, participants were not asked to distinguish between

Type of Performance Space(s)	Percentage of Choices	Percentage of Responses
Standard classroom with seats removed	19.3%	28.9%
Combination gym and auditorium (gymtorium)	17.5%	26.3%
Combination cafeteria and auditorium (cafetorium)	10.5%	15.8%
Dedicated theatre space	52.6%	78.9%

Figure 6: Types of Existing Performance Space(s)

particular types of theatres, such as black box, general purpose auditorium, or standard theatre stage. Additionally, participants were asked to select any and all types of performance spaces at their school. Therefore, when looking at the percentage of responses, "Dedicated theatre space" jumped to 78.9%, reinforcing that a majority of respondents schools have a dedicated theatre space in addition to using other types of spaces for performance. While fewer schools used a cafetorium for performance, 26.3% of responses noted that they use a gymtorium for performances, while 28.9% used standard classrooms with seats removed. In the Omasta (2012) study, 12% of respondents used a cafetorium/gymtorium for their theatre programs, which is lower than the percentage of international schools using these types of spaces in this study. It is important to note that the quantity of responses collected in the Omasta (2012) study was much higher.

Of respondents who had a dedicated theatre space, 59.4% indicated having two or more dedicated theatres, while 40.6% have one dedicated theatre space available (Figure 7). Participants were also asked about the seating capacity of their largest dedicated theatre space, with 35% of respondents noting between 201 to 400 seats (Figure 8). Forty-six percent (46%) of respondents indicated that their theatre seating capacity is between

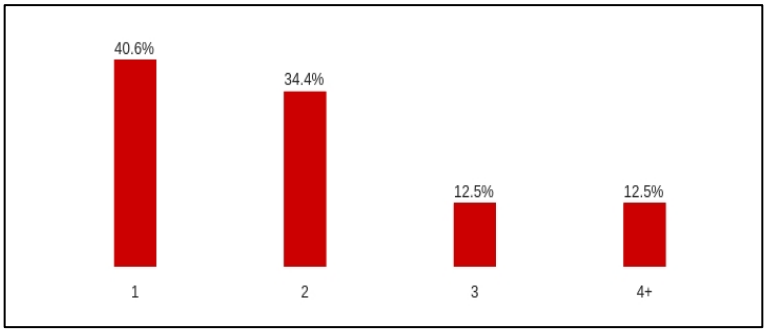


Figure 7: Quantity of Dedicated Theatre Spaces

401 and 800 seats. Respondents in schools enrolling less than 500 students tended to have theatres seating less than 600 seats. Interestingly, theatres sitting 801 to 1000+ were found in responses from schools with enrollment of 501 – 1,500. Schools with enrollment over 1,500 students showed maximum seating capacity between 600 – 800 seats. This is similar to the findings in the Omasta (2012) study where he found that 41% of respondents sat between 500 – 999 people. Omasta (2012) also discovered that 16% of his respondents sat fewer than 200 people and 9% sat 1,000 or more. While it could be that Omasta (2012) found a larger percentage of 1,000+ seat spaces, that may be due to differences in school sizes between U.S. public schools and international schools.

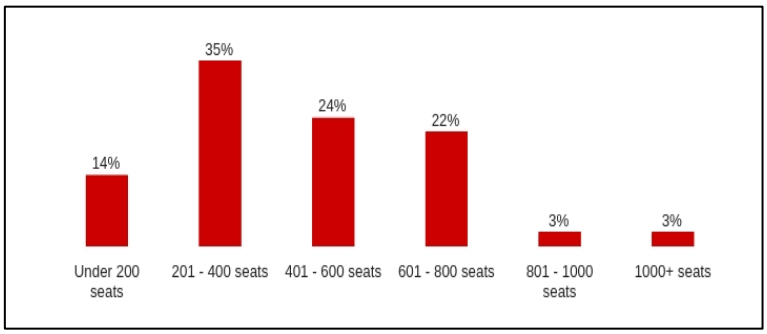


Figure 8: Seating Capacity of Largest Dedicated Theatre Space

Regarding the relative age of their main theatre space since either construction or major renovation, the majority of respondents indicated that their main theatre space was less than 10 years old in 49% of cases (Figure 9). Only 19% of respondents stated that their main theatre space has been in place for over 20 years since either initial construction or major renovation. This is a major difference when compared with the Omasta (2012) study where 80% were 10 years old or more, with almost half of which were at least 30 years old. While this may be due to the fact that many international schools are relatively young, some have been

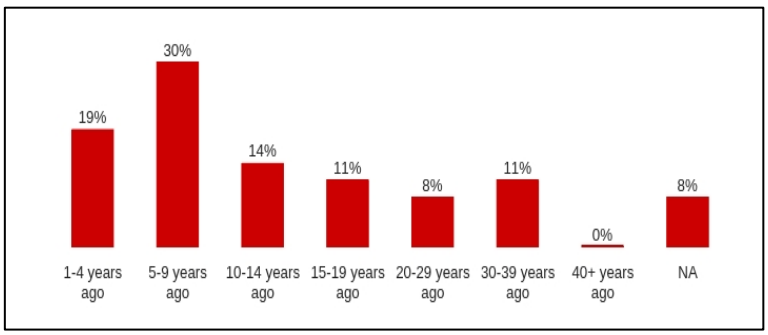


Figure 9: Age of Theatre Space(s)

around for many decades, such as Singapore American School at 65 years of age, Shanghai American School at 111 years, and Seoul Foreign School also at 111 years.

Participants were then asked to respond to a series of questions pertaining to access to various production support spaces, as well as mechanical and technical production systems in their dedicated theatre space(s). Though overall it seemed that most of these support spaces and systems were lacking, the most common support spaces found were change rooms (61%) and green rooms (55%). Less than one third of respondents indicated having a scene shop (32%) or costume shop (29%) attached to or nearby their theatre space (Figure 10). These are slightly lower than Omasta's (2012) findings in U.S. schools in which 51% and 44% of respondents did have scene shops and costume shops available respectively.

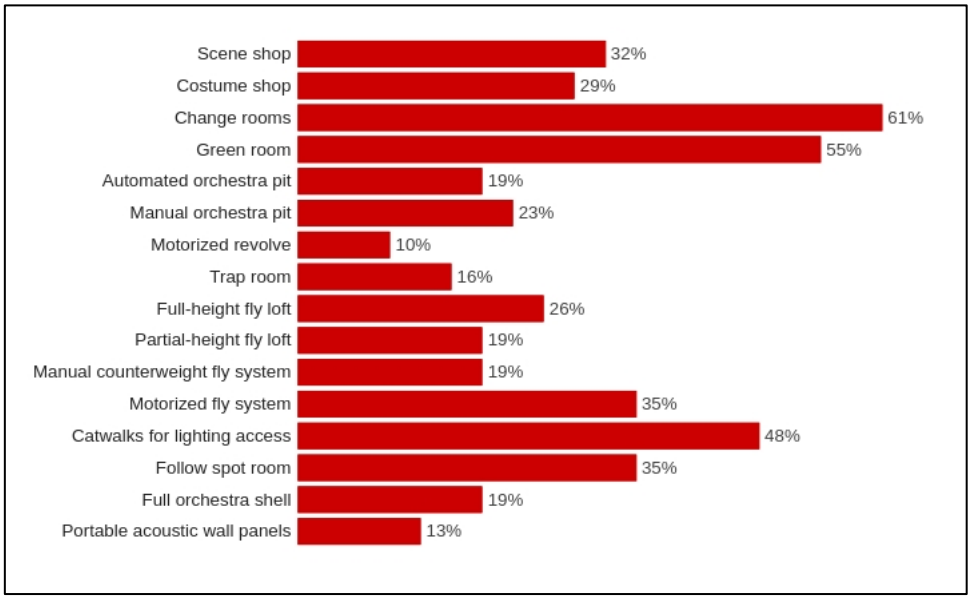


Figure 10: Existing Features of Theatre Spaces

Regarding mechanical systems, 42% of respondents had the presence of an orchestra pit, 19% of which are automated. While Omasta (2012) did not qualify the type of orchestra pit, his study also found that 42% of U.S. school theatres had access to an orchestra pit. Few theatre spaces included a revolve (10%) on the stage, as well as a trap room (16%) underneath the stage deck, both features that Omasta (2012) did not include in his study. Forty-five percent (45%)

have fly lofts, 26% of which are full height. This is in line with Omasta's (2012) findings with 54% of respondents indicating the presence of a fly system, 35% of which indicated motorized systems. Omasta (2012) did not include type of fly system in his study.

Regarding the lighting equipment, 48% of respondents mentioned the presence of catwalks for accessing lighting positions. Particularly in school settings, catwalks provide convenient, safe access to lighting instruments which is highly valuable for student technicians. Thirty-five percent have a follow spot room, with 79% of respondents indicating that their theatre has follow spots available (Figure 11). Yet relatively few schools have invested in automated lighting instruments, whether LED or not. Surprisingly, 50% of respondents indicated having less than 50 lighting instruments when compared with the data regarding seating capacity. Higher seating capacity generally denotes a larger stage, which would typically mean larger quantities of lighting instruments. However, as the uptake of LED lighting instruments is quite

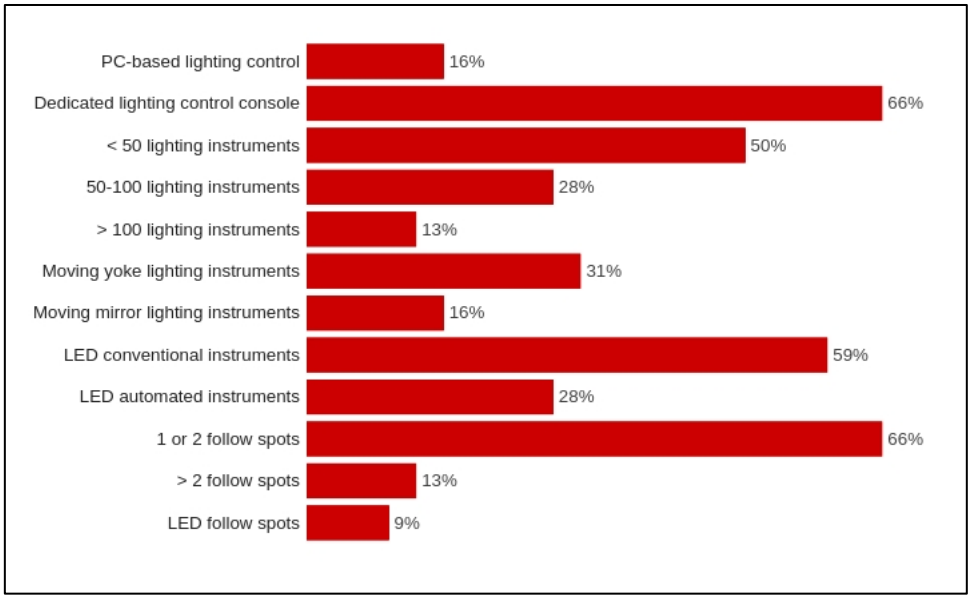


Figure 11: Lighting Equipment Available in Theatre Space

high (59% for conventional instruments), it may be that fewer total instruments are utilized because of the increased functionality of LED lighting instruments.

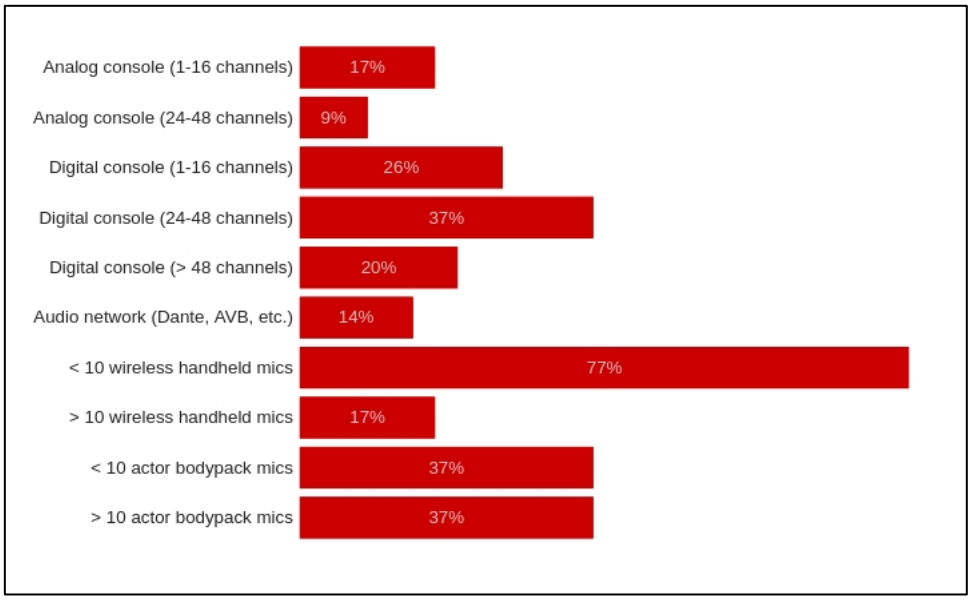


Figure 12: Audio Equipment Available in Theatre Space

Regarding the audio equipment, relatively few respondents have stage acoustic shells either as fully installed systems (19%) or portable (13%). As school theatres are often multi-purpose spaces, acoustic shells assist in modifying the stage acoustic space to be more conducive to musical applications. Digital audio consoles are commonly found in respondents theatres, accounting for 83% of responses (Figure 12). Curiously, digital audio networks seem not to be utilized, making up only 14% of responses. Seventy-seven percent (77%) of respondents indicated having less than 10 wireless handheld mics available, with equal responses regarding availability of actor bodypack mics (37%).

Participants were then asked to rate their perceived quality of the support spaces, mechanical and technical systems in their dedicated theatre space(s). Similar to Omasta's (2012) findings, the perceived quality of sound and lighting systems were rated quite high, with 57% of respondents indicated having "Good" or better sound systems, and 54% indicated having "Good"

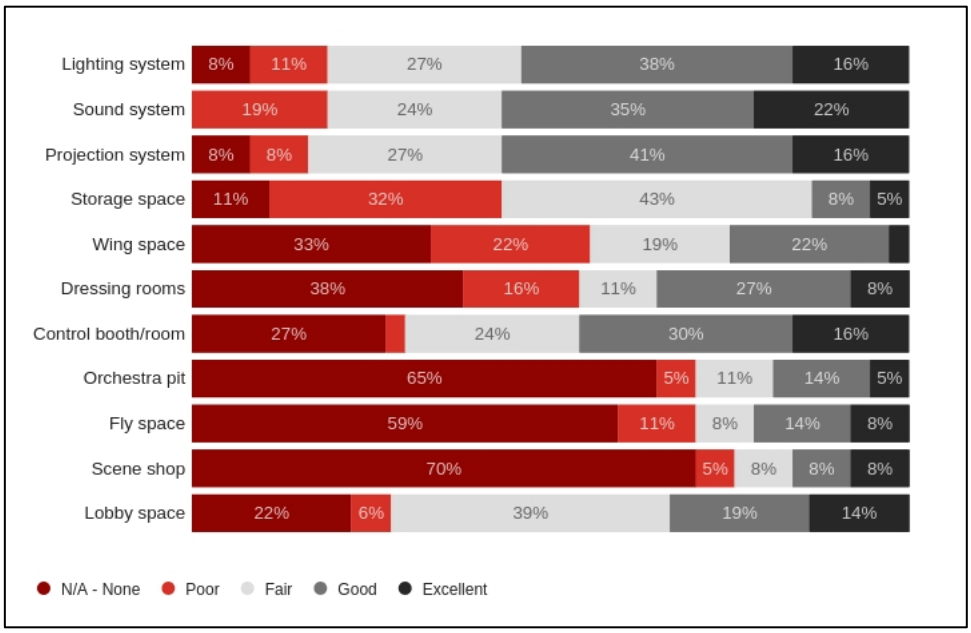


Figure 13: Perceived Quality of Existing Features

or better lighting systems (Figure 13). Omasta (2012) found 65% "Satisfactory" or better sound systems, and 63% "Satisfactory" or better lighting systems in his responses. Omasta (2012) did not include information regarding a projection system in his study. While the current investigation did not specify the type of storage space, only 5% of participants regarded their storage space as being "Excellent". Omasta (2012) specified storage as Lighting Instrument Storage, Prop Storage, and Set Storage, and received "Excellent" quality responses of 9%, 7%, and 6% respectively, not dissimilar to the current study findings. Overall, perceived quality of production support spaces as well as mechanical/technical support systems was not hugely different from Omasta (2012), even though the quantity of participants was greatly different. This finding is somewhat surprising considering the relative ages of the theatre space(s) between those found in the U.S. and those found in international schools. One would assume that newer

facilities would be better equipped, include increased access to production support spaces, and be perceived to be of higher quality, but that does not appear to be the case.

Participants were then asked to provide information regarding how their existing theatre space(s) were actually used across a number of different types of programs each academic year. About 59% of respondents indicated producing at least one full-length musical while approximately 66% of respondents created at least one kids/JR-length musical each academic year. In a similar trend, 50% of respondents generated at least one full-length play while about

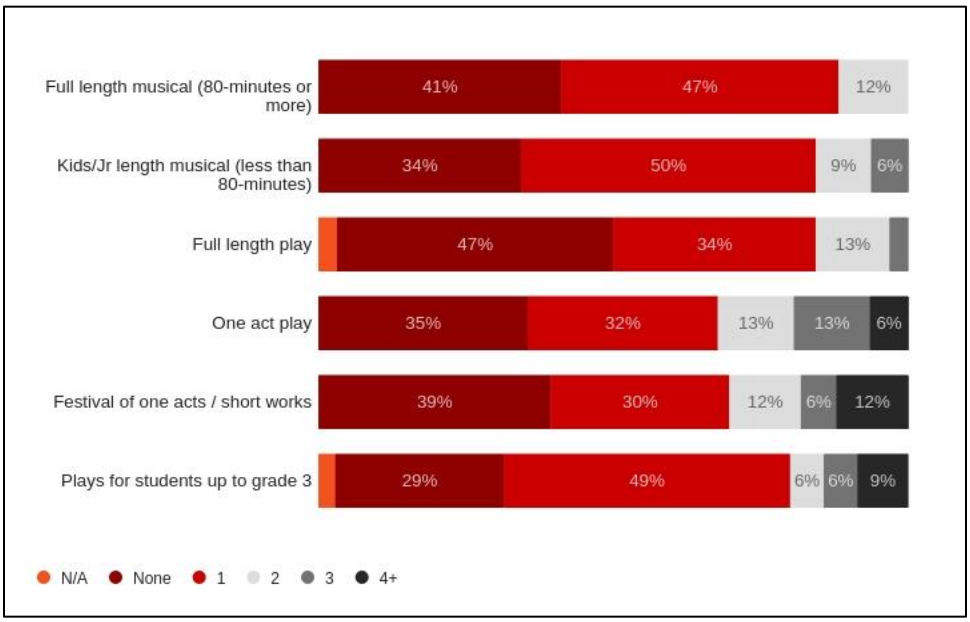


Figure 14: Quantity of Drama Productions Produced Annually

63% of respondents produced at least one one-act play each academic year (Figure 14). Omasta (2012) found higher percentages of respondents producing full length musical and non-musical works (78% and 85% respectively), but that is most likely due to the fact that he surveyed high schools exclusively. In international schools, festivals of one-act plays or short works seemed to be common, with 60% of respondents producing at least one festival each academic year. Similarly, drama opportunities for young children seemed to be common with about 71% producing a drama production for students up to grade 3. This last metric can not be compared

with Omasta's (2012) study as he did not survey primary schools in the U.S. In all cases, 51% of respondents indicated holding one to two performances for each drama production, while 46% of respondents indicated that they held three to six performances for each drama production.

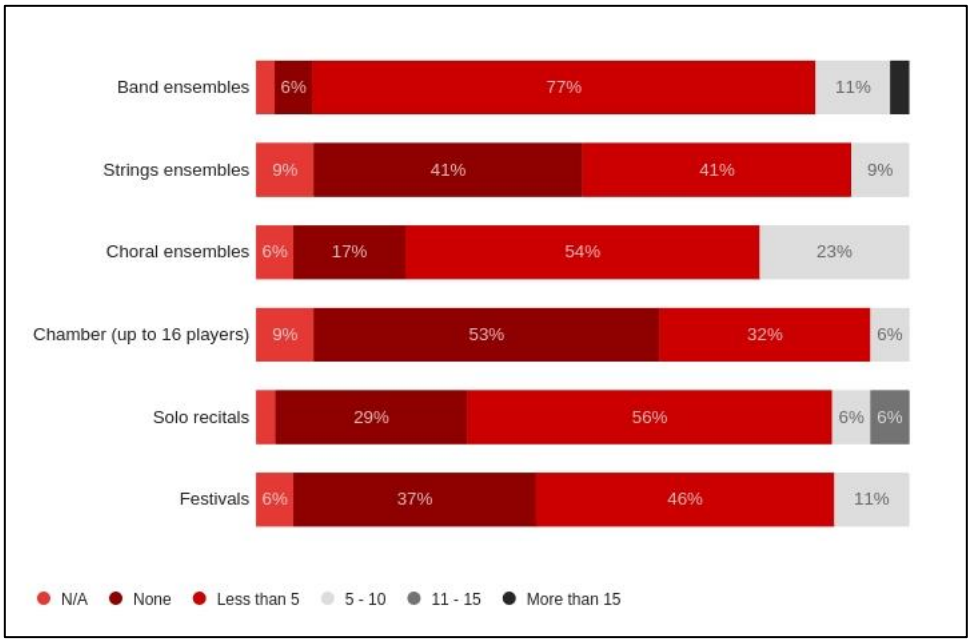


Figure 15: Quantity of Music Performances Produced Annually

While Omasta (2012) looked specifically at the theatre arts, this study took a broader approach and asked participants to respond to a number of additional programming sources for theatre space(s). Music departments also use theatre spaces for school performances throughout the school year. Respondents indicated that theatre spaces were used for at least one band (91%), strings (50%), and choral (77%) performance each academic year (Figure 15). It is unclear whether strings programs at respondents schools are less popular, thereby producing fewer performance events, or whether they may be included in another ensemble type due to combined ensembles in a single performance event. Of particular interest, 62% of respondents indicated "N/A" or "None" regarding chamber ensemble performances (players up to 16). Similar to the responses regarding strings ensembles, it is unclear whether this indicates a lack of chamber

ensembles or a lack of specific performance events for these groups. About 68% of respondents use theatre spaces for solo recitals and 57% for music festivals.

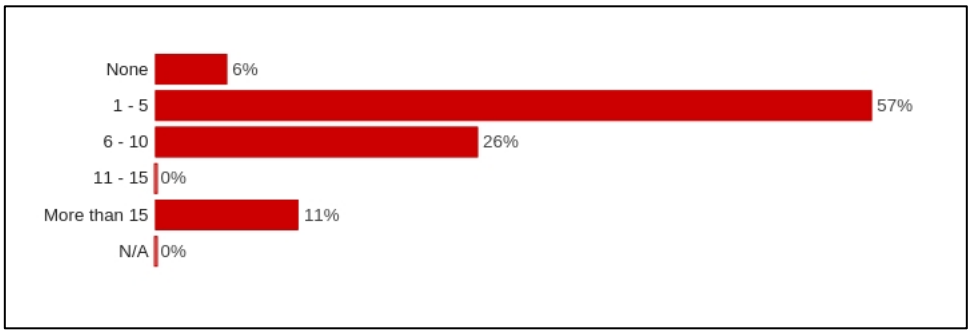


Figure 16: Average Weekly School-Related Events in Theatre Spaces

Beyond performing arts programs, schools will often make use of theatre spaces for presentations, assemblies, classes, and other school-related events as well. Ninety-four percent (94%) of respondents noted that their school theatre facilities were used for these purposes throughout the school week, with 83% having between one to 10 school-related events on average per week (Figure 16). Fifty-seven (57%) indicated that their theatre spaces are scheduled for regular academic classes, with 85% having one to 10 class periods per week scheduled into the theatre space. The questionnaire did not ask respondents to clarify whether these classes are performing arts related or not.

Last, participants were asked whether their school theatre space(s) are used to host events by outside organizers, or those who are outside of the school community. Respondents were more evenly split, with 51% hosting external events in their theatre spaces. For those who responded that their school did allow external events, 67% hosted less

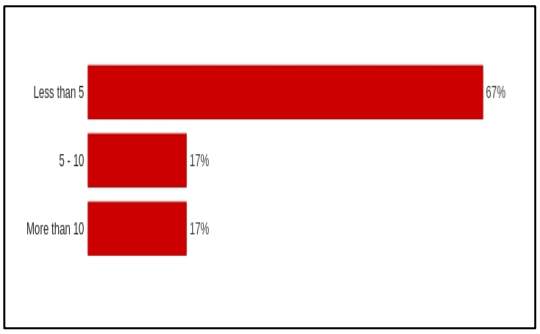


Figure 17: Average Annual External Events in Theatre Spaces

than five external events per academic year, while 33% indicated hosting five or more external events per academic year (Figure 17).

Participants were next asked to respond to a series of questions regarding the financing of the theatre space(s). Surprisingly, only 54% of the respondents indicated that their school has a dedicated operating budget for covering operational expenses. Of those, 56% had an annual operating budget equivalent to $10,000 USD or less, while the remaining 44% noted annual operating budgets exceeding that amount (Figure 18). For covering expenses related to the replacement of or new purchase of capital equipment, only 44% indicated that their school has a dedicated capital expenditure budget. Of those, 54% have an annual capital expenditure budget equivalent to $15,000 USD or less, while the remaining 46% exceed the equivalent of $20,000 USD (Figure 19). Omasta's (2012) study did not inquire into facility funding, but rather looked at sources of theatre program funding.

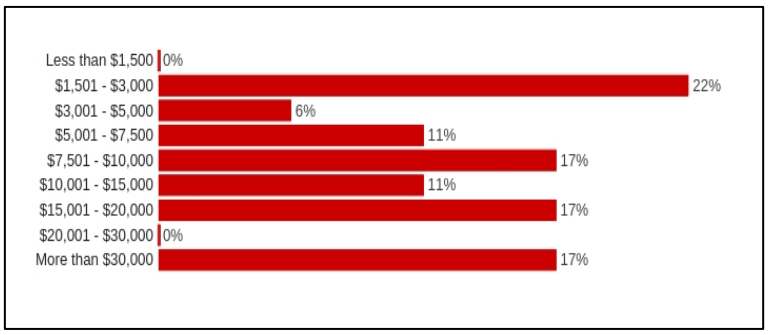


Figure 19: Annual Operating Expense Budget Amount

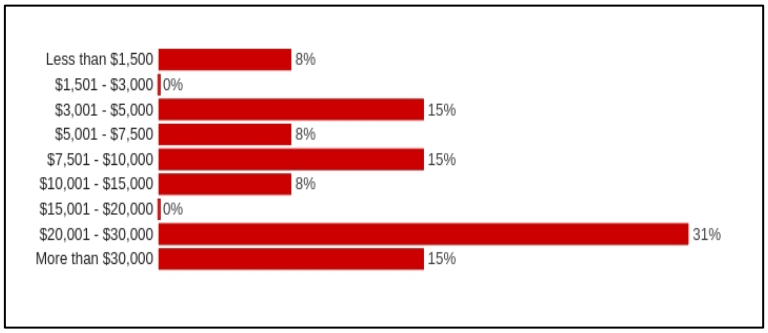


Figure 18: Annual Capital Expenditure Budget Amount

In addition to dedicated budgets for operating expenses and capital expenditures, participants were asked about any other sources of funding that may support the theatre space(s). While the majority of funding comes directly from school budgeted money (35% of choices),

Funding Source	Percentage of Choices	Percentage of Responses
Ticket revenue from events	15%	41%
School budgeted money	35%	97%
Fundraising events (by school, parent boosters, or other groups)	20%	56%
Advertising in programs	5%	15%
Donations from individuals or organizations	12%	32%
Government grants or subsidies	0%	0%
Facility rental	7%	21%
Corporate sponsorships	5%	15%

Figure 20: Sources of Funding for Theatre Space(s)

there were some other sources of funding indicated (Figure 20). The most common alternative funding sources included fundraising events (20%), ticket revenues from events (15%), and donations from individuals or organizations (12%). This is similar to Omasta's (2012) findings of most common funding sources for theatre programs in U.S. high schools, being ticket sales, fundraising events, and donations. While 97% of respondents indicated funding directly from the school, a mixture of funding sources seemed to be common. Fifty-six (56%) received funds from fundraising events, 41% from ticket revenues, and 32% from donations. Of the 57% of respondents that charged admission to performing arts performances, only 35% indicated ticket revenues being directed back to the theatre space(s). Another 35% of respondents indicated that ticket revenues are sometimes directed back to the theatre space, while 30% responded that ticket revenues are not redirected at all. By comparison, Omasta (2012) found that 89% of responses indicated box office revenue being received by the theatre program with only 4% receiving no ticket revenue. Interestingly, though not surprising, as most international schools are private institutions, there were no responses for funding from government grants or subsidies. Otherwise, corporate sponsorships, advertising fees, and facility rentals were shown to be the

smallest sources of funding. This is not surprising in that only 38% of respondents indicated that their theatre space(s) are rented out to outside organizers.

Participants were then asked to provide information regarding the staffing of their theatre space(s). When asked about the quantity of employees providing operational and/or managerial support regardless of their position (such as having teaching duties), 49% of respondents have two or three members of staff with some level of responsibility (Figure 21). When asked about the quantity of employees whose job was exclusively to provide operational and/or managerial support for the theatre space(s), 54% indicated that their school employeed zero to one staff member (Figure 22). For those schools that did allow for theatre space rental to outside organizers, 69% required school employees to provide operational support to those events. Omasta (2012) specifically looked at Theatre educators, and while he found that 100% of respondents teach at least some theatre courses, about 1/3 teach theatre courses exclusively. His study did not look at school employees whose main purpose is the support/management of theatre spaces.

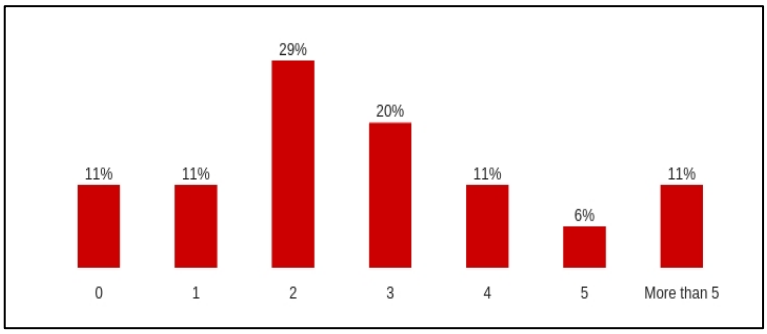


Figure 22: Quantity of Staff (Regardless of Position)

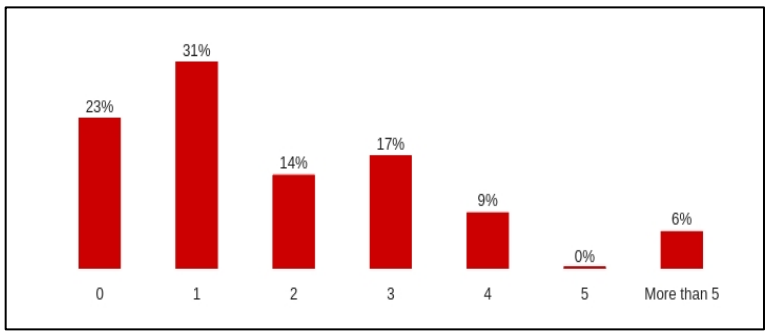


Figure 21: Quantity of Dedicated Theatre Staff

Participants were also asked to indicate the level of education obtained by staff members providing support to the schools' theatre space(s). Staff members held all degree types (or no

degree), though most common were staff members holding undergraduate degrees in non-related fields (Figure 23). Overall, theatre staff members were less likely to hold graduate degrees, and only 50% of theatre staff members had taken additional coursework or professional development in theatre technologies in the previous 5 years. It should be noted that during the previous three years, opportunities for training may have been limited due to the COVID-19 pandemic. The majority of theatre staff members (56%) were hired locally while 32% indicated that their schools employ both local and overseas hires (Figure 24). For those that do not hire school employees for operational and/or managerial support, 12% noted that their school will sometimes contract out this work, while 29% said they will sometimes contract out this work. Fifty-nine (59%) overwhelmingly stated that they do not contract out theatre staffing, but the questionnaire did not ask them to provide additional information as to who held those responsibilities (Figure 25).

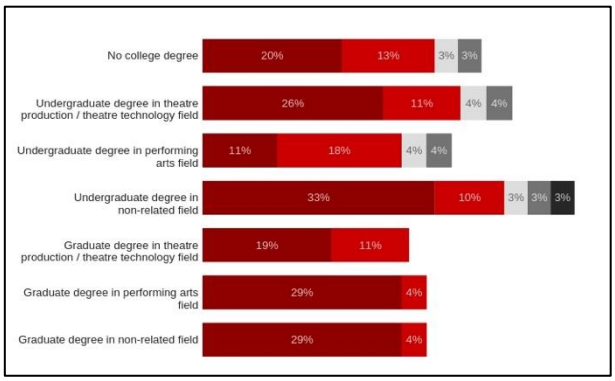


Figure 23: Quantity of Staff Members by Education Completed

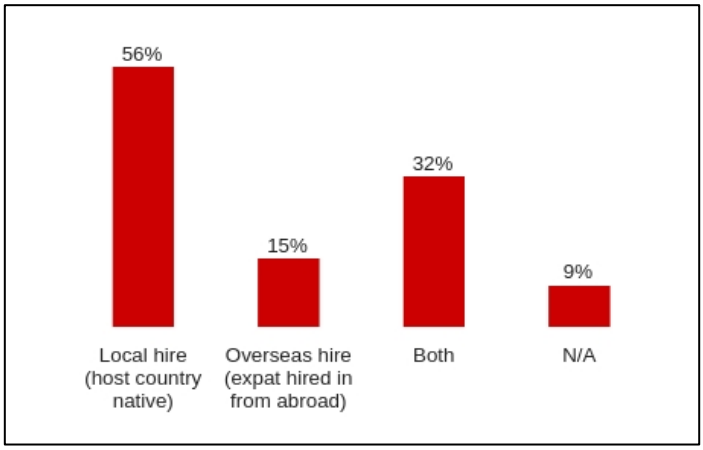


Figure 24: Contract Types for Theatre Staff

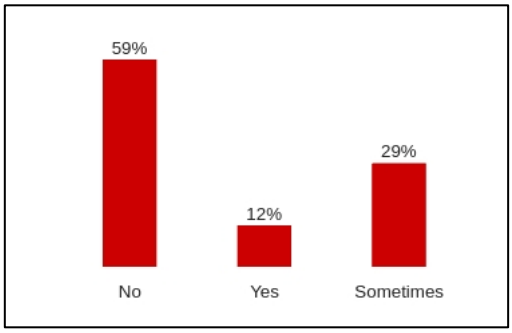


Figure 25: Percent that Schools Contract Out Theatre Staffing

The final part of the questionnaire asked participants to respond in an open-ended response

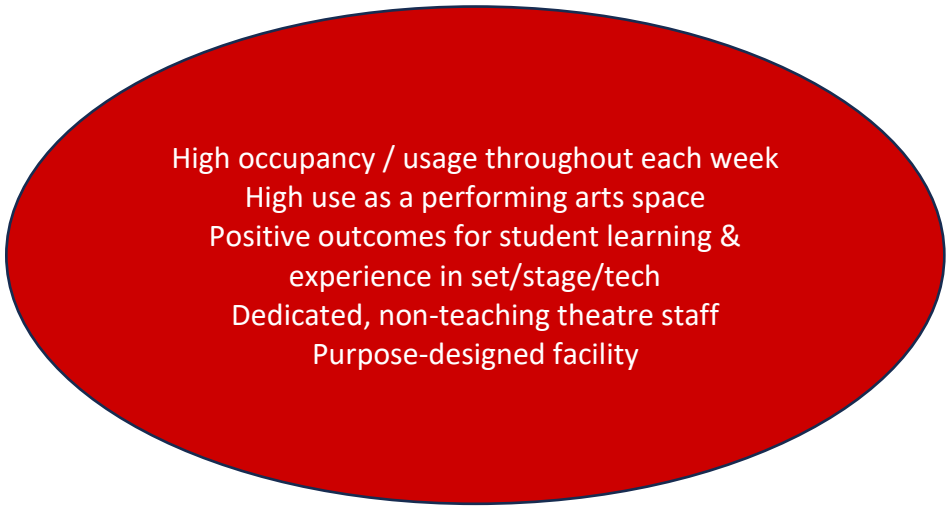


Figure 26: Positive ROI Statements

about whether or not they believed their school is or is not maximizing the return on investment in the theatre space(s). Return on investment was defined as "the extent to which a theatre space(s) is meeting the goals/purposes for which it was designed for built; a measure of 'alignment.' Return on investment includes financial returns as well as social returns (value generated that is not financial; for example, providing opportunities for students to learn scenic construction.)." This question received 30 (n = 30) responses from the 55 returned surveys. Of those, 11 (n = 11) thought their school was using their theatre space(s) well and receiving a positive return on investment, accounting for 23.4% of responses (Figure 26). Many of the positive responses included mentions of high usage (for multiple purposes), particular focus on supporting performing arts programs, opportunities for students to learn and experience the areas of technical, set and stage production, having a dedicated, non-teaching theatre staff available to provide support in the theatre space(s), and the facility itself being well designed and equipped to support performing arts programs in particular.

Ten (n = 10) responses did not think their school was receiving a positive return on their investment, accounting for 21.3% of the responses (Figure 27). The majority of negative responses included particular statements regarding the theatre space(s) not being properly

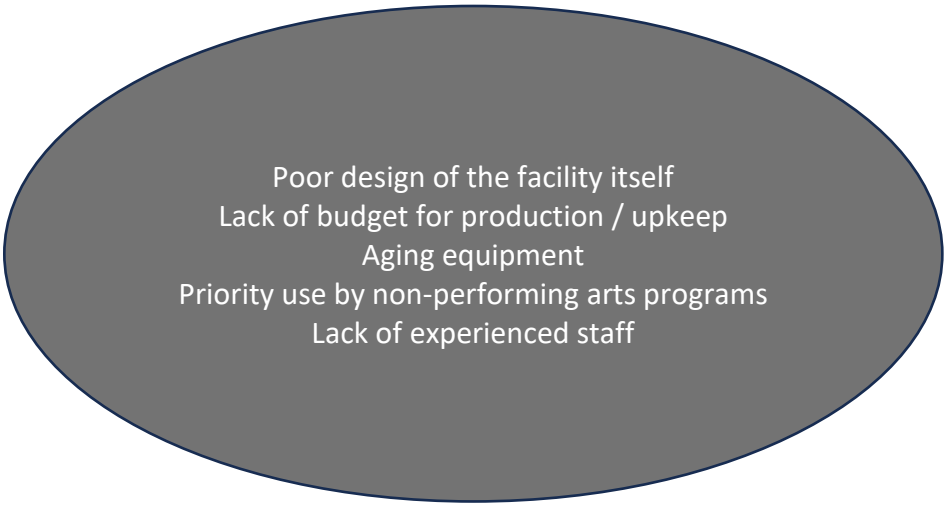


Figure 27: Negative ROI Statements

designed to meet the needs of performing arts events. Respondents also mentioned aging equipment, priority use by non-performing arts programs and events, and lack of experience/trained staff members.

In line with the low rate of the response to the survey as a whole, twenty-six (n = 26) returned questionnaires that did not include a response to this question, accounting for 55.3% of the responses. One response did state that the participant preferred not the answer the question, and the others shows "N/A." Whether this is because those respondents are from schools that do not have a dedicated theatre space, or they simply did not want to provide an answer to the question, is unknown.

Overall, the completed response rate for this question was around 45% with answers split almost evenly between positive and negative opinions on whether respondents schools were

receiving a good return on investment. All responses to this question that were received are included in Appendix O.

Phase 2: Stakeholder Map

Phase 2 asked participants to complete two design thinking activities in an online, asynchronous format, the first of which was a stakeholder map. Participants were asked to consider any and all stakeholders who may be invested in the theatre space(s) and to list those out on a collaborative whiteboard. Fify-four individuals (n = 54) were invited to participate representing thirty-four (n = 34) international schools across the Asia Pacific and Southeast Asia region. Eight (n = 8) participants provided consent and contributed to Phase 2 of the study, representing a participation rate of about 14.8%. Participants' areas of responsibilities broke down as follows:

Choir Teacher / Theatre Support – one (n = 1)

Theatre Teacher / Theatre Support – two (n = 2)

Communications / Theatre Support – three (n = 3)

Theatre Manager / Performing Arts Center Director – two (n = 2)

Dance Teacher / Theatre Support – one (n = 1)

IT Director / Theatre Support – one (n = 1)

Six (n = 6) others responded to the recruitment email stating that at the time of the study, though interested in participating, they did not have the time available to contribute.

The stakeholder map instrument was a single, collaborative instrument that all participants contributed digital sticky notes to. In total, fifty (n = 50) digital sticky notes were added to the stakeholder document. Participants were given 10 days to contribute to the

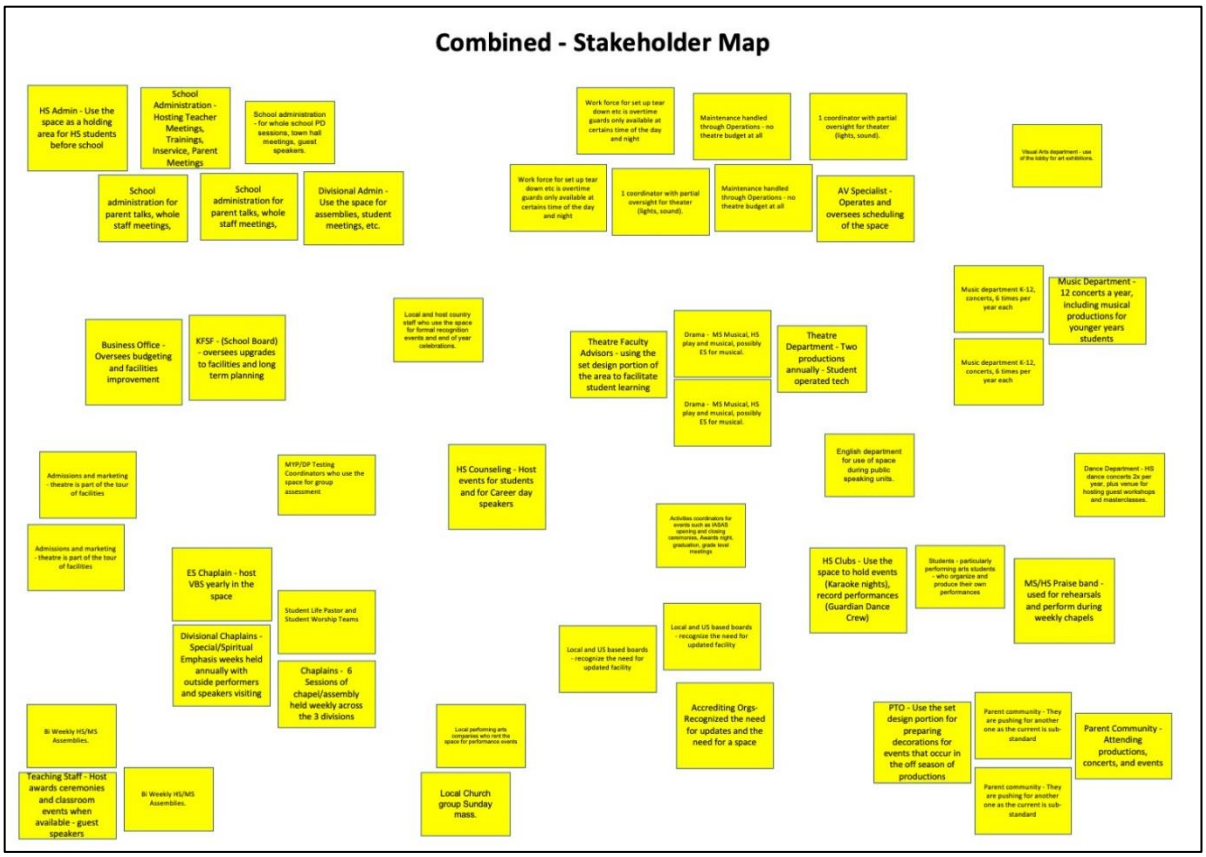


Figure 28: Collaborative Stakeholder Map

stakeholder map once providing consent. The stakeholder map document was then closed once the contribution window had passed for all participants.

The digital sticky notes were then grouped using affinity clustering according to like-stakeholders as described by the participants comments. The initial affinity clustering with stakeholder labels can be seen in Figures 28 and 29. This initial clustering looked only at the participants digital sticky notes as-is and did not combine duplicates, similar stickies, or attempt to combine stakeholders that may fit within a slightly broader stakeholder group. The stakeholder categories most mentioned by quantity of digital sticky note included the theatre staff (n = 7), administration (n = 6), parents (n = 4), drama department (n = 4), and spiritual life department (n

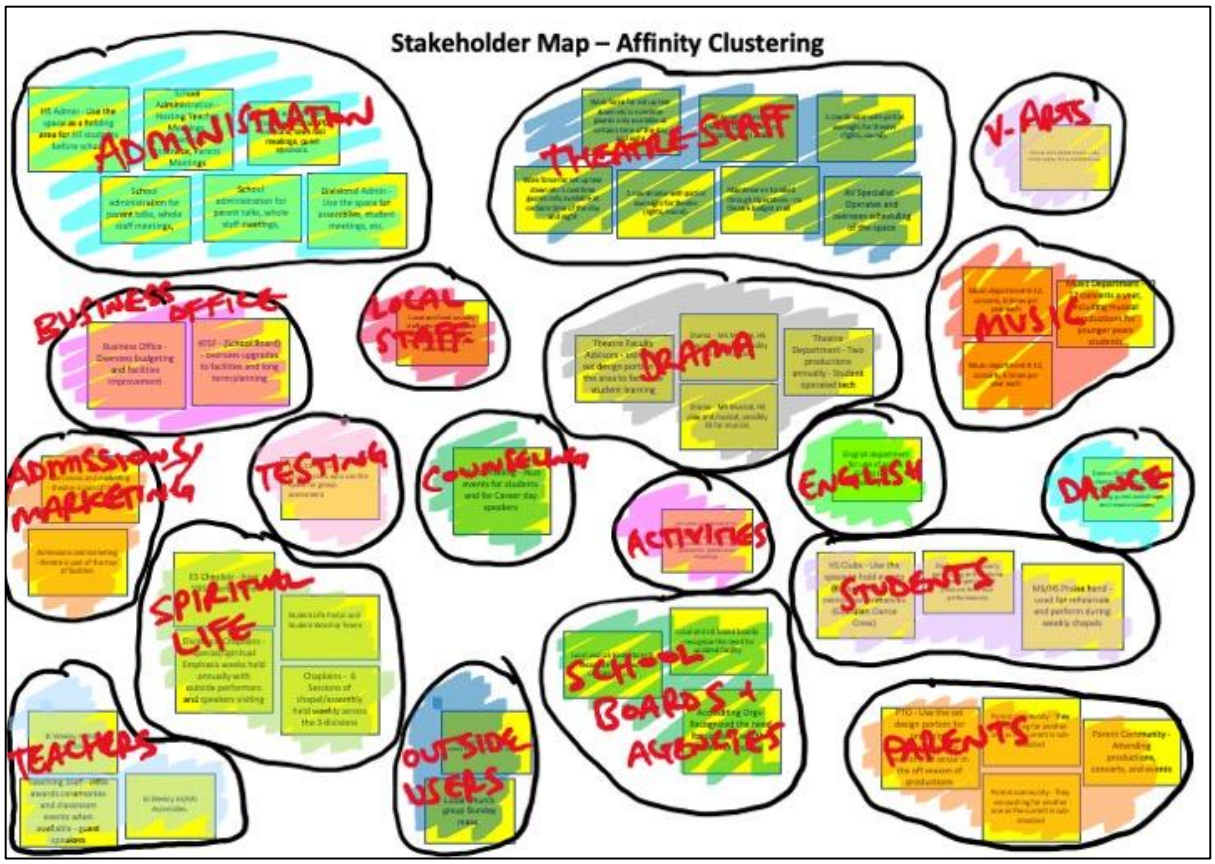


Figure 29: Affinity Clustering

= 4). Specifically regarding the spiritual life department, it should be noted that of the thirty-four schools contacted, 10 (n = 10) are schools with a religious affiliation.

A second round of affinity clustering took the initial groupings and combined them into slightly broader, though related, stakeholder groups, which can be seen in Figure 30. When combining stickies into more generalized groups, the largest stakeholder groups that were communicated are the school administration (n = 13), school life (n = 11), and performing arts (n = 8). Not surprisingly and mirroring the results shared from the questionnaire in Phase 1, use of the theatre space(s) by outside groups appeared least frequently as a stakeholder group, which

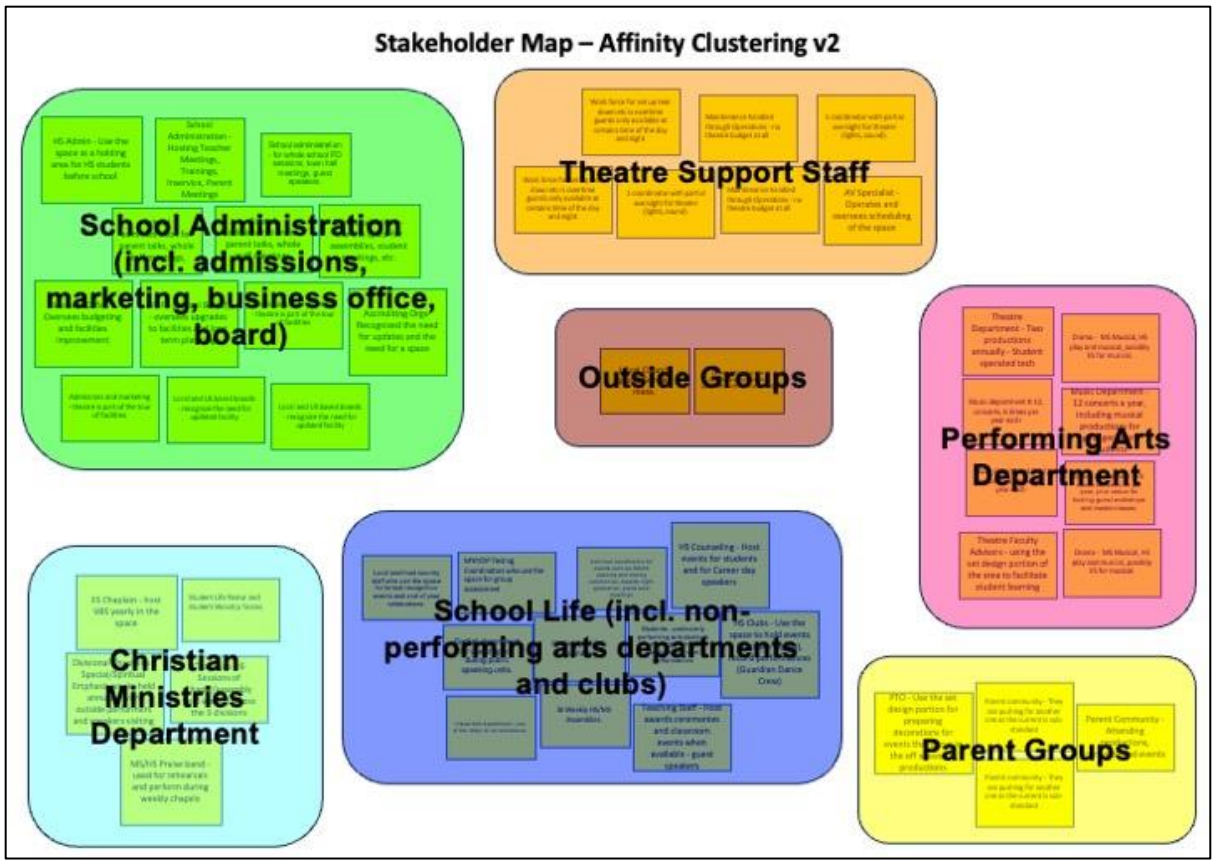


Figure 30: Affinity Clustering v2

may indicate either a lack of outside users among participants schools or that outside user groups are not a part of the purpose for schools' investments in their theatre space(s).

The overall purpose for the stakeholder map exercise was to get an idea of the primary stakeholders invested in an international schools theatre space(s). Interestingly, the stakeholders identified through this activity confirmed the variety of the roles laid out by Rand (2015), which included school administration (superintendents, principals, human resource directors), school life personnel (custodians, teachers, other school personnel), and performing arts (teachers, directors, and students). Rand (2012) advocated the importance of employing specialized theatre personnel responsible for the management and operations of the school theatre space, as well as

necessity for other stakeholders to be educated about the functions, features, and processes of a school theatre.

When building or renovating these spaces, all these groups would be important to involve when considering the design, equipping, support staffing, and annual budgeting for theatre space(s) in order to avoid many of the pitfalls documented by Reiss (1968) in *Who Builds Theatres and Why?* Earlier, the question was posed whether international schools have been immune to the pitfalls documented in the United States? The discussion of Phase 1 would suggest not, despite the average age of international school theatres differing from Omasta's (2012) findings of United States high school theatres in that they are generally newer facilities. And while it may not be possible to know which of these stakeholder groups were involved in the intitial design and construction of international school theatres, Phase 1 shows that there are in fact many similarities in school theatre facilities around the world. Robinson (1951) pointed out that theatre architecture is both financially costly as well as permanent. Therefore, involving these stakeholder groups in all processes of the construction or renovation process is a first step in maximizing the return.

Also, recall that Phase 1 showed that rental or use by outside groups was not highly valued or occuring in international schools. The stakeholder map developed in Phase 2 further supports this in that external users represented the smallest stakeholder group generated. Without financial returns from such use, financial return-on-investment calculations used on the physical plant as described by Watson (2016) cannot be the only measurement for an educational theatre, if at all. There must be something of higher value causing international schools to make these large facility and capital investments. This led to the second activity to be completed by

participants. To read all of the digital sticky notes contributed by participants towards the stakeholder map, refer to Appendix P.

Phase 2: What's On Your Rada

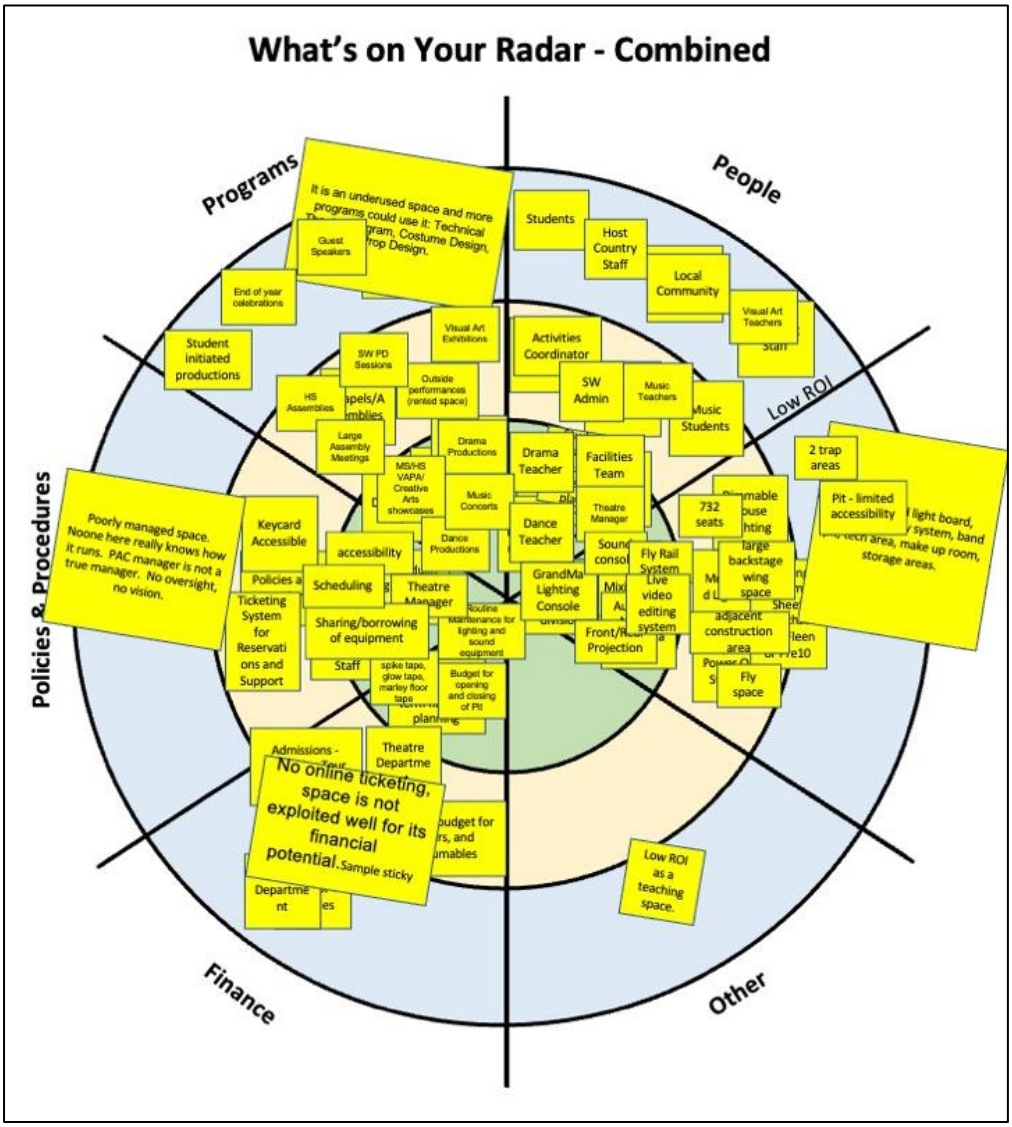


Figure 31: Combined Radar Document

The second design thinking activity that Phase 2 participants were asked to complete was a What's On Your Radar exercise. This activity was completed individually by each participant.

The radar asked participants to write and place digital stickies on top of a provided radar template to indicate what factors in each category are important (or not important) when attempting to determine the ROI of a theatre space(s). Participants were given 10 days to complete the activity (along with the stakeholder map) after completing the online consent form.

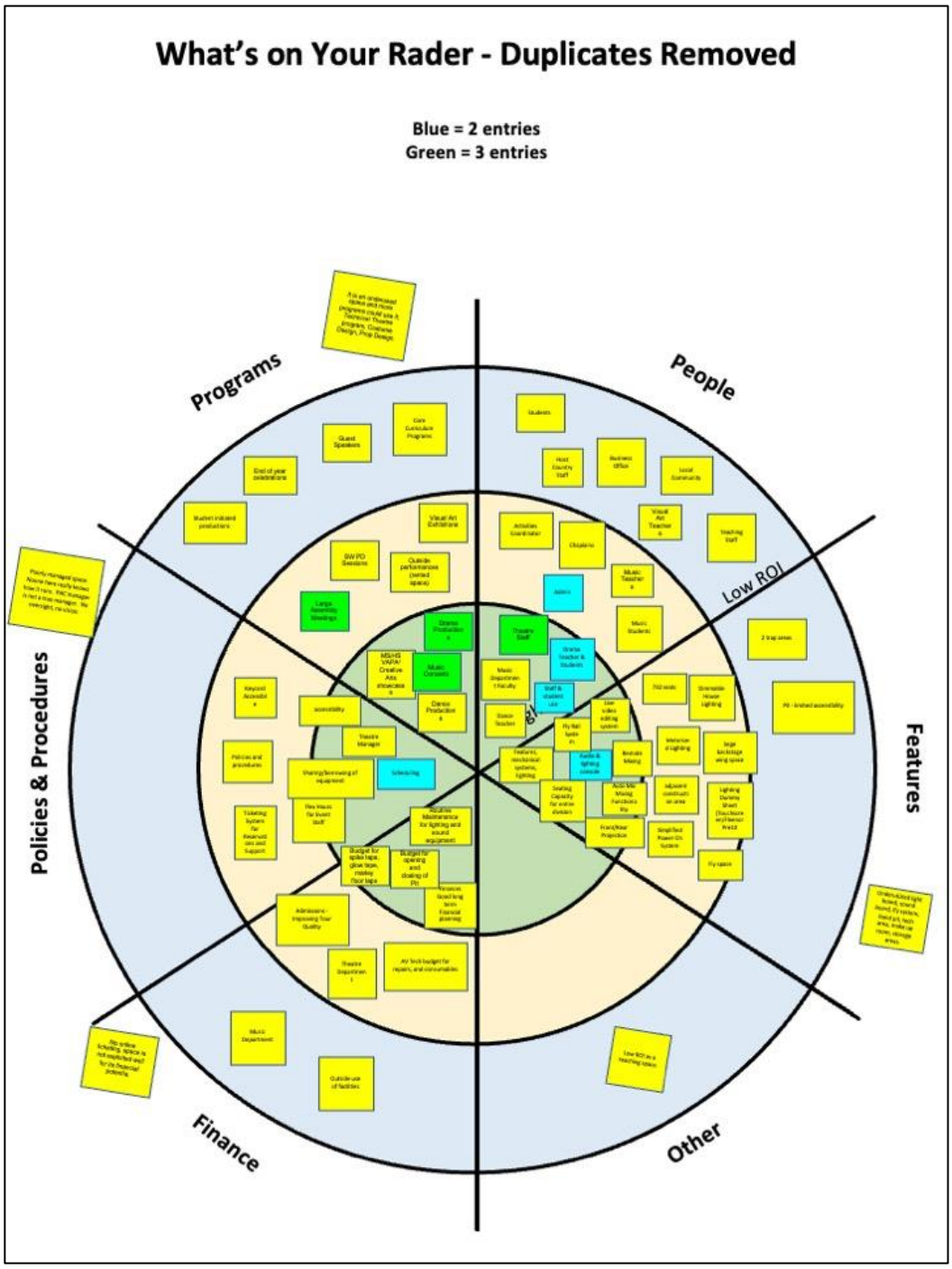


Figure 32: Radar diagram with duplicates removed

After the time window passed, the Radar document locked. Once the time window for all participants had passed, all of the digital stickies from the individual radars were copy-and-pasted onto a single Radar diagram (Figure 31). Digital sticky notes were then resized so that all of the stickies were readable.

Once the stickies were readable, duplicates were removed and the color changed to indicate individual stickies that were submitted multiple times. If two entries were submitted, the sticky was recolored blue. If three entries were submitted, the sticky was recolored green. The resulting radar document is shown in Figure 32.

The radar document was set up so that the participants could place a sticky note in a pie piece from “High ROI” to “Low ROI”. These were to be indicators that the participants felt provided evidence of a theatre space either having a high return on investment or a low return on investment. The categories included people, features, finance, policies and procedures, programs, and other.

Under the people category, participants indicated that a high return on investment would include the presence of a dance teacher, music department faculty, theatre staff, drama teacher and students, and the facility would have staff and student use. Theatre staff was mentioned the most, having three (n = 3) digital sticky notes submitted. Having drama teachers and students, and having staff and student use included two (n = 2) digital sticky notes submitted. Stickies that indicated a low return on investment interestingly included students as well. Additionally, participants listed host country staff, business office, local community, visual art teachers and teaching staff on low return on investment. This may be due to six (n = 6) of the participants coming from an area of performing arts. It is interesting that “students” was listed both as high ROI and low ROI. It seemed that non-performing arts related people were considered of low

return on investment while all of the high return on investment stickies were performing arts related, showing that participants seemed to agree that the main people a theatre space is for are those in the performing arts area, whether faculty or students. Though they indicated this as showing a high return on investment, when compared with the stakeholder map, the performing arts group was not the largest stakeholder group represented. Understanding "people" in the investment discussion is important in addressing common problems discussed by Reiss (1968), such as not having a determined user, users not having a role in design or planning, incompatibility with user needs, etc.

The features category could include any facility feature, equipment, or support area to the main theatre space. Participants submitted stickies for high return on investment that included having a live video editing system, remote mixing capabilty, auto mic mixing functionality, front/rear projection, fly rail system, audio and lighting console installed, seating capacity for entire school division, and mechanical and lighting systems. The presence of a lighting and audio console was submitted twice (n = 2). Features such as trap areas and limited accessibility orchestra pit were submitted as being low return on investment. Most theatre space(s) are built with the intended purpose of live performance, so it is interesting that having a live video editing system was listed as an indicator of high return on investment. Perhaps this is a result of the COVID-19 pandemic when audiences around the world were unable to attend performances in-person and the value/necessity for live streaming in schools became high. It is also important to note that production support space such as storage, scene shop, costume shop, or lobbies were not included as indicators of high return on investment. Having a large backstage wing space was the only production support space listed under features, and it was indicated as a medium return on investment. Robinson (1951) noted that theatre architecture is the most costly and permanent

of all the arts, so it is interesting that many of the stickies were equipment-focused rather than building features. One explanation may be due to the fact that many building features are being taken for granted by international school employees as Phase 1 showed the existence of lobbies, orchestra pits, and other building features that older construction, gymtoriums, or cafetoriums lacked. Another reason may be some employees responsible for the theatre space(s), if not trained theatre professionals, may not know about certain features commonly found in modern theatres. Understanding "features" is important in addressing questions of facility use prioritization, compatibility with users needs as described by Reiss (1968).

In the finance category, indicators submitted showing a high return on investment included budget for routine maintenance of lighting and sound equipment, budget for consumables such as spike tape, glow tape and marley floor tape, budget for opening and closing of the orchestra pit, and good long term financial planning. Low indicators included budget for the music department and outside use of the facilities. Surprisingly, the budgets listed as high return on investment were all facility/regular operation focused rather than specific to types of productions or events. Perhaps this indicates that operational budgets are more highly valued and that individual events or programs are budgeted separately from the facilities. To further support the findings related to facility rentals, "outside use of facilities" was posted in the low return-on-investment part of the radar diagram, emphasizing again that revenues generated by facility rental is not a high priority. Interestingly, there were no revenue-generating stickies added to this activity, which contrasts Omasta's findings that 89% of his responsdents received regular or substantial support from ticket sales. Perhaps this is due to the fact that the survey in Phase 1 showed most international schools provided an operating and/or capital expense budget of some amount. Omasta (2012) noted in his survey that a majority of administrators (58%) considered

theatre to be “not very” or “not at all” profitable as a program. If this is the case, then it would be necessary for schools valuing theatre and performance arts programs to provide annual funding to run those programs.

In the policies and procedures category, respondents included accessibility, sharing/borrowing of equipment, flex hours for event staff, scheduling, and theatre manager as indicators of a high return on investment. Though a theatre manager would normally fall under the “people” category, it could be that the participant indicated that having a theatre manager to write, enforce, and manage theatre space policies and procedures is indicitive of a high return on investment. Scheduling was submitted twice. Mid-level return on investment included keycard accessibility, policies and procedures, and ticketing system for reservations and support. Regarding accessibility, it is not known whether this had to do simply with having access (time) to the facility, or whether this had to do with ADA or special ability access to the facility either as a performer/presenter or an observer/audience member. Rand (2015) addresses many of these topics in her book detailing high school theatre operations. She writes as a strong advocate for a full-time theatre manager in schools as the theatre facility administrator responsible for the development of and enforcement of policies and procedures to help maximize the potential of a schools’ theatre space. Davey (2010) and Pyfrom (2015) discussed the safety considerations of school theatre spaces and those who use them. Therefore, employing a theatre professional who can establish clear policies and procedures is important not only for the safety of those in the theatre space(s), but to ensure that equipment and systems within the space can be used properly and maximize their potential.

The programs category received quite a few sticky notes from participants. They listed drama productions, music concerts, dance productions, and middle school, high school, visual

and performing arts, and creative arts showcases as indicators of high return on investment. Low return on investment included student initiated productions, end of year celebrations, guest speakers, and core curriculum programs. Similar to the "people" category, it seems that the performing arts-related programs were valued the most over non-performing arts-related program use of the theatre space(s). "Drama productions" was submitted twice as well as "music concerts" as indicating a high return on investment. The middle of the radar included visual art exhibitions, outside performances (rented space), school wide professional development sessions, and large assembly meetings, which was listed twice. Rand (2015) notes that many school theatres currently operate as "road houses", theatres that are used for programs in addition to the schools' performing arts programs. She notes that this is a good idea so that the school (or district) can cover operational costs of the facility. In the international school setting, theatre space(s) are used heavily as multi-purpose spaces, but very little for external groups. In many cases, access to the facilities is enough of a challenge considering all of the internal use requests.

The "other" category was not utilized by participants with the exception of a single sticky that listed a low return on investment if used as a teaching space. This is consistent with some of the other stickies which favored the theatre space(s) being used as a performing arts-related facility. The actual use of the theatre space(s) by performing arts programs will vary from school-to-school depending on the performing arts programs that are offerred and how much access they need to the theatre space itself. The phase 1 questionnaire showed that theatre space(s) are used quite a bit, but it did not specifically ask how many hours per day were theatres used, or how many days a week did they sit "dark" (unused). The idea of the theatre space

intentionally not being used as a teaching space would be an interesting point to look into further.

The overall purpose for the What's On Your Radar exercise was to collect ideas that could be used as indicators of a school's theatre space either receiving a high return on investment or not. The most common indicators across all categories as receiving a high return on investment included scheduling, staff and student use, drama teacher and students, theatre staff, drama productions, music concerts, and having an audio and lighting console. Each of these were repeated two or three times by participants. They represent all major slices of the diagram with the exception of "finances" and "other." This points out the importance of looking at return on investment through a lens much broader than the traditional financial lens. Watson's (2016) application of return on investment to the physical plant does not seem to apply to the international school theatre. Therefore, exploring social return on investment as first developed by Emerson (2000) may be more applicable, as demonstrated by Watson, Evans, Karvonen, and Whitley (2016) to cancer support centers, or Jackson and McManus (2019) to art galleries, or Davies, Taylor, Ramchandani, and Christy (2021) to community sport and leisure facilities.

Keeping social return on investment in mind, the indicators of return on investment collected during Phase 2 became the starting point for the in-person design thinking session conducted during Phase 3 of the study.

Phase 3: Creative Matrix & Visualize the Vote

The third phase of the study was held in-person at Seoul Foreign School in Seoul, South Korea. Sixteen (n = 16) individuals from international schools around Seoul were invited to take part in a design thinking session. Individuals included a range of stakeholders including theatre

teachers, theatre technicians (local hires), theatre managers, music teachers, mid-level arts administrators, senior administrators, and managers of general affairs (local hires responsible for school facilities). Six (n = 6) individuals responded to the invitation and filled out a preferred date form. Due to last minute schedule changes, four (n = 4) individuals actually attended the workshop. This translates to 25% of the contacted sample. Participants' areas of employment represented:

Mid-level administrator / Director of Arts – 1

Drama Director – 1

Orchestra Teacher – 1

Theatre Technician – 1

The first exercise participants engaged with was the Creative Matrix. Participants were presented the combined Radar diagram with a brief discussion regarding the process that participants completed. Once presented, workshop participants were asked to each pick out a single indicator that they wished to explore further. Indicators had to come from the "high return on investment" portion of the diagram, and participants were encouraged to try and pick an indicator from different radar slices to allow some diversity in the workshop activities. The indicators from the radar that were chosen were: (1) drama productions, (2) scheduling, (3) accessibility, and (4) good financial planning. Though there were four (n = 4) participants, the group wanted to pick a fifth indicator: staff/student use (access).

The student researcher had pre-determined a list of enablers provided from the Luma Workplace platform that included: (1) events & programs, (2) internal policies and procedures, (3) facilities and environment, and (4) people and partnerships. Each of these was described in detail and then instructions for the creative matrix activity itself were given. Participants were

provided yellow sticky notes, and a 15 minute timer was started. Participants were asked to write one idea at the intersection of the enabler and indictor per sticky note and to hold on to all of their sticky notes until the time had finished, after which they placed their ideas on the whiteboard. Each idea was to be an outcome (or evidence) of what it would look like if the indicator was successfully fulfilled by the enabler.

It is important to note that the category of "Accessibility" was left open to interpretation as it was not clearly defined during the Phase 2 exercise. Participants noted that it could be interpreted as referring to the needs of those with special abilities, while it could also be interpreted as ways in which diversity, equity, inclusion, and justice (DEIJ) topics are intentionally addressed. For the purpose of the Creative Matrix exercise, participants were free to post ideas embracing either of those interpretations.

Once all ideas were posted, the student researcher read out loud all of the sticky notes to the group working down each column for each indicator. By reading the ideas aloud, all participants heard the contributions of the other members, and individuals were able to provide any clarification needed on ideas that they contributed. All of the contents of the sticky notes are available in Appendix Q, along with additional notes taken by the student researcher from the clarifications.

After completing the discussion, the student researcher introduced participants to the next design thinking activity, Visualize the Vote. Instructions were provided to the participants that they were to vote on those outcomes that they felt would provide the best evidence that a high return on investment was being received. Each were given four pink sticky tabs to indicate an overall vote, along with eight orange sticky tabs to indicate two detail votes. Participants were instructed to cast one overall vote and two detail votes per column (per indicator). Due to the low

quantity of stickies received for the "Staff/Student Use (Access)" indicator, that indicator was not included in the Visualize the Vote exercise. Participants were given 3-minutes to cast their votes for the remaining four categories. The results of the vote, showing the ideas with the highest number of participant votes, are as follows:

	Results
Drama Productions	Overall Vote: # of students involved in theatre productions including actors, musicians, stage managers, tech, backstage, etc. (3 overall votes) Detail Vote: School commitment to school-wide program & director (2 detail votes, 1 overall vote)
Scheduling	Overall Vote: A centralized communication / person for scheduling use of spaces (2 overall votes) Detail Vote: In a place with multiple venues, rotate events to ensure the maximum use of spaces (3 detail votes)
Accessibility	Overall Vote: Differently abled people being able to easily access spaces (4 overall votes) Detail Vote: DEIJ awareness in performances in regards to racial equality, etc. (4 detail votes)
Good Financial Planning	Overall Vote: Transparent budget process (1 overall vote, 2 detail votes) Detail Vote: Excellent care of facilities as well as updating of equipment (4 detail votes)

Table 1: Visualize the Vote Results

Once all votes had been cast, the student reseacher discussed the results and made note of the ideas that received the highest quantity of votes from the participants (see Figure 33).

Figure 33: Creative Matrix Activity

Phase 3: Round Robin & Critique

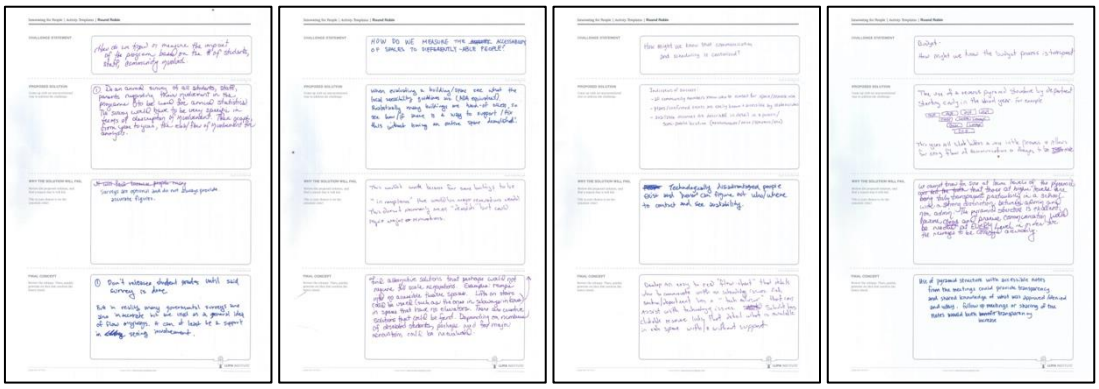


Figure 34: Round Robin Activity

The next design thinking method the participants completed was a Round Robin exercise that built off of the results from the Visualize the Vote. Participants were provided a template

document for the activity, and each participant began with one of the four ideas that received the highest number of detail votes. On the top of the provided Round Robin worksheet, participants phrased their idea in the form of a Statement Starter. The four statements were written as follows:

1. How do [might] we know or measure the impact of the program based on the # of students, staff, community involved?
2. How might we know that communication and scheduling is centralized?
3. How do [might] we measure the accessibility of spaces to differently-abled people?
4. How might we know the budget process is transparent?

The participants then completed the Round Robin activity using the template document in 5-minute intervals. During the first 5-minutes, participants needed to propose a solution to the problem statement. At the end of the time, they then rotated their templates around the table. During the second 5-minutes, participants needed to propose reasons why the proposed solution would fail. At the end of the time, partcipants rotated their templates a third and final time. During the last 5-minutes, participants needed to make a final proposal addressing the failure(s) listed.

Once all portions of the Round Robin activity were completed, the final activity for the workshop was to engage participants in a Critique of the Round Robin worksheets. The student

researcher read out each worksheet and asked the participants to critique the proposals while the student researcher took notes.

The following tables sumarize the results of the Round Robin activity for each of the problem statements addressing the four indicators of return on investment.

(1) How do [might] we know or measure the impact of the program based on the # of students, staff, community involved?
Proposed Solution: Conduct an annual survey of staff, students, and parents regarding their involvement. Compare survey results year-to-year to gauge changes. Reason for Failure: Surveys are optional and do not always provide accurate figures. Solution to Address Failure: Withhold student grades until survey is complete.

Table 2: Round Robin Results for Indicator #1

One of the positives communicated during the critique of Indicator #1 is that a survey is a tool that can be administered to a wide variety of stakeholders and can therefore provide a broad range of perspectives on the program. Additionally, surveys can be built to measure specific data points from specific stakeholders as desired by the school. However, one challenge with surveys is that they often have a low rate of return. Some participants thought that while witholding grades is a possible solution, it may not be fair especially when students are involved in an extra-curricular program. Another idea for addressing the failure therefore is to conduct the survey at a pre-determined point during the production process. This would allow respondents to respond while the process is fresh in their minds and would help to capture the details that happen during the production process that may get forgotten afterwards. Another idea is that a school could gather quantitative data separately, such as involvement numbers, ticket sales, attendance demographics, etc. and then conduct a shorter survey to collect qualitative data and feedback. It

was brought up again that such a survey, units of measurement, and defined goals would be unique for every school and program, but this could be a type of tool that can be used anywhere.

(2) How might we know that communication and scheduling is centralized?
Proposed Solution: • All community members would know who to contact for space/resource use • Plans/confirmed events are easily known & accessible by stakeholders • Available resources are described in detail in a public / semi-public location Reason for Failure: Technologically-disadvantaged people exist and never can figure out who/where to contact and see availability. Solution(s) to Address Failure: • Develop an easy-to-read flow chart that details who to communicate with on scheduling issues. • Each section/department have a "tech advisor" that can assist with technology issues • Schedule includes clickable resource links that detail what is available in each space with / without support

Table 3: Round Robin Results for Indicator #2

The worksheet for Indicator #2 did not lay out a specific tool that could be used to measure the indicator, but it did provide what success, or a high return on investment, may look like. In this way, the worksheet provided possible measurables for the indicator that schools could use to determine whether they have these solutions in place or not.

There was a lot of agreement and positive feedback from participants regarding the worksheet for Indicator #2. It not only defined what success would look like, but it also provided a mechanism for achieving it. It was noted that training is an essential element towards achieving this indicator. Even if a school were to have a flow chart available, a sectional advisor, or accessible resources, schools would still need to provide training to users in order to access or fully utilize those resources. Examples were given of a known international school where job

titles of multiple support roles actually led to confusion of their responsibilities, which could be avoided both by using appropriate job titles, but also by using an up-to-date flow chart. Examples were also given of known schools that had such flow charts and processes, yet they were not easily accessible to the users of the theatre spaces, which caused this particular indicator to suffer. In many schools, non-performing arts teachers may only need to use the space one or two times during the entire academic year, so it is unreasonable to expect those users to remember policies or procedures without easy access to those flow charts and resources.

(3) How do [might] we measure the accessibility of a space to differently abled people?
Proposed Solution: • When evaluating a building/space, see what the local accessibility guidelines are (ADA equivalent). • Realistically many buildings are hard-of access, so see how/if there is a way to support/fix this without having an entire space demolished. Reason for Failure: This wouldn't work because for some spaces to be "in compliance" there would be major renovations needed. This doesn't necessarily mean "demolish" but could require major renovations. Solution(s) to Address Failure: • Find alternative solutions that perhaps would not require full scale renovations. Examples: ramps into non-accessible theatre spaces; lifts on stairs could be used (such as the ones in subways in Korea) in spaces that have no elevators. • There are creative solutions that could be found. Depending on numbers of disabled students, perhaps need for major renovations could be reevaluated.

Table 4: Round Robin Results for Indicator #3

The worksheet for Indicator #3 led to an interesting discussion in that the participants thought that the majority of international schools admit fewer students with physical special needs. Unless a school is building a new facility requiring current building codes to be met, participants felt that older spaces are less likely to be updated or renovated as the number of students with special physical needs are relatively few, not considering any student injuries.

Participants agreed, however, that focusing on the student population does not justify that way of thinking. Schools are places where students "perform" to extended family and community members, whether artistically, athletically, or other. For example, it is common to have grandparents and extended families at graduation or promotion ceremonies. Therefore, conversations regarding accessibility need to look broader than the student population.

Another comment discussed is that different abilities may also be unseen and not physically apparent. How are theatre spaces constructed to support access by those who may be living with varying ability levels of sight, hearing, or mental abilities. Participants discussed the importance of considering these individuals regarding access to the stage itself, access to seating, audio coverage, signage and wayfinding, egress in emergencies, and more.

As with Indicator #1, participants noted that the measurement of accessibility may look differently depending on the country the school is located in, local regulations, and the community served. A good starting point for determining points of measurement would be to involve a school's risk manager / safety manager or head of facilities. Together, they should consult local regulations as well as conduct a study of the extended school community. This will hopefully allow the school to identify the support that is currently needed, as well as any changes that should be made in order to address special abilities that may not be currently present in the community.

(4) How might we know the budget process is transparent?
Proposed Solution: • The use of a reverse pyramid structure by department starting early in the school year. For example: Department Members → Department Director / Coordinator / Line Manager → Senior Leader / Line Manager → CFO This gives all stakeholders a voice in the process and allows for easy flow of communication of changes to be made. Reason for Failure: We cannot know all lower levels of the pyramid that those at higher levels are being truly transparent particularly in a school with a strong distinction between admin and non-admin. The pyramid structure is excellent; however, clear and precise communication would be needed at every level in order for the messages to be conveyed accurately. Solution(s) to Address Failure: Use of pyramid structure with accessible notes from the meetings could provide transparency and shared knowledge of what was approved/denied and why. Follow up meetings or sharing of the notes would increase transparency.

Table 5: Round Robin Results for Indicator #4

The critique for Indicator #4 also generated quite a bit of discussion. While there were positive comments regarding the pyramid structure and the idea of sharing budget meeting notes, there was equally, if not more, negative comments indicating a lack of trust in this structure due to the different layers within the pyramid. The two overarching themes developed from the critique were those of "access" and how to define "transparency."

Regarding access, participants felt that transparency often gets clouded the further down the line a message is relayed, much like the childhood game of Telephone. When the decision-makers (CFO and/or senior leadership) are multiple levels from those using or requesting budget items, those further away lack the ability to provide rationale for their requests, or have

discussion regarding approvals or denials, directly with those making the decisions. To quote one of the participants, “it is difficult learning that a budget item was denied, but it is more challenging to trust decision makers when a rationale or explanation is not provided for it.” Participants noted that if decisions are made with explanation, then it is easier to accept decisions and trust those making them.

Regarding the definition of transparency, individual participants were not in agreement. This is perhaps due to the fact that participants represented different levels of the pyramid structure. Some believed that transparency meant that budget information be provided only as-needed in order to perform their role. Others believed that transparency meant that they should be able to discuss and have viewing access to their departments’ budget as a stakeholder in it. All participants mentioned having work experience with different types of CFOs and levels of transparency and that what transparency looks like can change within the same organization depending on the beliefs and leadership style of the current CFO.

The worksheet for Indicator #4 did not actually provide a proposed solution in the form of a tool, and perhaps this indicates that the organizational structure and culture plays a role in shaping how this indicator might be measured.

All of the completed Round Robin worksheets are available for viewing in Appendix R.

Applying the SROI Framework: Prototype

While only two of the Round Robin exercises produced ideas for tools that could be used for measuring indicators, the design thinking workshop provided valuable insights in two ways. First, using the diverse perspectives of the participants, they provided information as to what each indicator may look like if it was being successfully met. Perhaps more importantly, however, it became apparent that indicators of return on investment are not universal, and that individual schools may focus on different indicators depending on their context, environment, their physical theatre space(s), etc. What is most important, therefore, is having a framework available to assist international schools in defining what indicators are most critical for them and then determining how they may best be able to measure any outcomes to determine how they are performing.

Phase 1 showed that while international school theatres may be newer or surpass high school theatres in the United States in some areas, in many ways the problems faced are no different. Phase 2 illustrated that financial returns are not the most appropriate method for measuring an international schools' return on investment in multi-million-dollar theatre space(s), but rather that intangible characteristics of their use, features, policies and procedures, programs, and people were more important when considering return on investment. Through looking at applications of social return on investment, it is apparent that such a framework is better suited to this application (Davies et al., 2020; Jackson, 2019; Watson et al, 2016)). Phase 3 showed that there are indicators that can be used – and measured – in order to determine whether an international school is maximizing the use of their theatre space(s), though the indicators may differ from school to school. Therefore, a framework for determining the SROI of international school theatres would be more suitable than a single, pre-defined tool.

What could such a framework look like? The Public Services (Social Value) Act 2012 in the UK has been required when awarding public funding for projects (*Public Services*, 2012). The act requires that social value be evaluated during this process, which includes the development of a social value model, a tool for providing consistency and standardization for departments and suppliers during procurement (*Social Value Act*, 2021). NEF Consulting, a firm that assists organizations in developing their own social value model, uses principles defined by Social Value International, a global network made up of independent and locally led organizations promoting social value and impact management (NEF Consulting; Social Value International). These principles were also used by Jackson and McManus (2019) at the Turner Contemporary Art Gallery, as well as by Davies, Taylor, Ramchandani, and Christy (2021) when looking at community sport and leisure facilities in the UK. Social Value International defines eight principles of SROI:

1. **Involve stakeholders**. Inform what gets measured and how this is measured and valued in an account of social value by involving stakeholders.
2. **Understand what changes**. Articulate how change is created and evaluate this through evidence gathered, recognizing positive and negative changes as well as those that are intended and unintended.
3. **Value the things that matter**. Making decisions about allocating resources between different options needs to recognize the values of stakeholders. Value refers to the relative importance of different outcomes. It is informed by stakeholders' preferences.
4. **Only include what is material**. Determine what information and evidence must be included in the accounts to give a true and fair picture, such that stakeholders can draw reasonable conclusions about impact.

5. **Do not over-claim**. Only claim the value that activities are responsible for creating.
6. **Be transparent**. Demonstrate the basis on which the analysis may be considered accurate and honest, and show that it will be reported to and discussed with stakeholders.
7. **Verify the result**. Ensure appropriate independent assurance.
8. **Be responsive**. Pursue optimum social value based on decision making that is timely and supported by appropriate accounting and reporting.

(Social Value International)

Using these principles, a framework or process for international schools to look at the investment in their theatre space(s) may be developed. While this will look different for each international school, as discussed with study participants, the following process could be undertaken:

Step 1: Determine who the stakeholders are to involve in the process

Step 2: Determine what indicators to use/include in the process

Step 3: Determine what the outcomes are for each indicator if met

Step 4: Determine how to collect evidence for each indicator

Step 5: Collect and analyze the evidence

Step 6: Report and determine next steps (an action plan)

Such a plan could be articulated in a planning documented to be filled out and used as a guide for measuring the social return on investment. A possible planning document might contain the following:

INTERNATIONAL SCHOOL NAME			
Indicator 1: Active drama performance program			
Description: Offer a drama performance program for students grades 3 through 12 providing age-appropriate opportunities for students to grow as actors and technicians while also providing volunteer opportunities for participants' parents.			
Stakeholders	Outcomes/Success Criteria	Metrics	Next Steps
• Drama director • Drama teacher(s) • Principal(s) • Program director • Music teacher(s) • Students • Parents	• At least one large production annually for students Grade 3 – 8 • At least two large productions annually for students Grade 9 – 12 • At least 200 students involved as performers or technicians across all productions • At least 40 parent volunteers across all productions • At least 75% returning participants from prior year • Positive experience for participants and volunteers	• Collect data on drama performance program offerings during the school year • Collect data on participants / volunteers during the school year • Post-production feedback survey for participants / volunteers	• Benefits to parent volunteers (comp tickets?) to encourage more volunteers
Indicator 2: High Attendance at Performing Arts Events			
Description: Develop audiences for all performing arts events to provide positive performance experience to performers and engage the entire community in the performance accomplishments of our students.			
Stakeholders	Outcomes/Success Criteria	Metrics	Next Steps
• Theatre Manager • Drama Director • Drama, music & dance teachers • Students • Parents • Principal(s) • Community	• At least 75% occupancy of theatre facility for performing arts events • Audience composition at least 40% students • Positive experience for attendees throughout the event process (from learning of an event through attending)	• Utilize data from ticketing platform (be sure to collect basic demographic data) • Scan/check-in tickets at all performing arts performances as well as manual-count • Post-event survey to attendees about experience, accessibility, etc.	• Adjust ticket prices for students to encourage more student attendees

Table 6: Prototype Planning Document

Once an international school identifies and defines the indicators that they want to use in order to look at their theatre space(s), they can use the plan across multiple years in order to determine areas where they grow or where they struggle in order to make informed decisions. Where this process differs from traditional SROI is that SROI often tries to monetize social value

in order to express that value in the common language of finances. As shown throughout this study, international schools seem to prioritize non-financial outcomes. Therefore, the above framework does not include monetizing the outcomes or reporting on them in monetary terms.

Internal Validity and Limitations

This study was conducted on the heels of the COVID-19 pandemic, while many areas of the world continued restrictions and prevention programs well into 2023. For example, South Korea did not drop its mask mandate until January 2023 (Kim & Choi, 2023) and, after 945 days, Hong Kong followed suit in March 2023 (Ng, 2023). For the 148 international schools within China (International Schools Database), abandoning of its zero-COVID strategy did not begin until December 2022. Numerous studies detail the effects of the pandemic on teachers, touching not only on the stresses of the pandemic itself, but also the mental health state of teachers as they return to the classroom (Kush et al., 2022; Westphal et al., 2022; Winfield & Paris, 2021).

As such, the low rate of participation was a limitation of the study throughout all three phases. For Phase 1, in order to achieve a sufficiently high number of responses for the study, the questionnaire was sent to a large quantity of international schools identified through established international school organizations. Though this phase of the study did not provide critical data for Phase 2 or Phase 3, it did give an overview of the status of theatres in international schools, which is a gap in the current literature. By contacting as many international schools as possible, enough responses were obtained to provide a better overview of theatres that are currently in use around the world. While a response rate of 5% to 30% is considered good, with an approximately 8% response rate for the current investigation, the findings from this research study cannot be generalized to the population of international school theatres (Chung, 2023).

The primary language of instruction in international schools is English and therefore the questionnaire was only made available in English. This could be considered a limitation, however, for those schools in which the survey was passed to a locally-hired employee who may not have felt comfortable completing the survey in English.

Previous instruments for this exact study were not found in the search for instrumentation for this study. There were, however, similar studies conducted in the past as mentioned in the literature review. Therefore, internal validity was addressed through using content-related evidence methods. Questions from these studies that were specifically relevant to this study were used in the questionnaire to ensure that the questions being asked were relevant and appropriate for the study.

Phase 2 also did not produce the quantity of participants as hoped. As many international schools began holding events again in the regions where recruitment took place, many of those contacted responded to the recruitment email that though they were interested in participating, they did not have the time available. This limited the quantity, and possibly the quality, of the feedback provided in the Stakeholder Map and the What's on Your Radar exercises in that the participant sample was not as diverse as hoped. In the three studies on theatre in United States high schools performed by Peluso (1970), Seidel (1991) and Omasta (2012), survey data could be compared between administrator participants and teacher participants. This study did not ask for that distinction to be revealed, so it is not possible to make a comparison in the responses between those in administrative roles and those who are not.

Finally, Phase 3 also did not produce the quantity of participants as hoped. The calendars for international schools in South Korea did not line up and as COVID protocols changed throughout the spring, changes to school events also occurred. Due to these year-end events, several subjects could no longer contribute during the week of the workshop; thus, all participants represented a single international school. Despite that, the workshop managed to still include diverse participants in terms of their positions within the school. However, there lacked

diversity that would have been represented from participants employed at more international schools.

Also, during the design thinking workshop, each participant began the round robin activity with a different indicator of return on investment. Given the size of the participant group, the student researcher should have adjusted the methods such that all participants worked on the same indicator, thereby producing greater diversity in the data results for the indicator and limiting individual bias.

Conclusion

The purpose of this study was two-fold: first, to examine the status of international school theatres through existing theatre facilities available, theatre staff demographics and qualifications, and theatre facility programming; and second, to explore the indicators (both tangible and intangible) that justify return on investment. Design thinking methods were used to assist in identifying and measuring indicators in order to evaluate international school theatre return on investment.

Regarding the first phase of the study, data showed that there were many similarities, as well as differences, between international school theatres and those represented in the United States through the Peluso (1970), Seidel (1991) and Omasta (2012) studies. Similarities were found regarding the average seating capacity of school theatres, as well as the perceived quality of production equipment and support systems. International school theatres seemed to be newer on average than those found in the United States and, though Omasta (2012) looked at funding sources for theatre programs specifically, it did not appear that funding sources for the facility as a whole was considered in any of the studies focusing on United States high schools.

This study provides the first birds-eye-view of the status of international school theatre(s) across the world. Like Peluso's (1970) original study, international schools should continue to be studied to follow trends not just in theatre building architecture, but in their use and how international schools are supporting them. After all, the international school market is stronger now than before the COVID-19 pandemic, and the quantity of international schools will only continue to grow (Data and Intel, 2022). And though many international school theatres are young, there will come a time when they begin the renewal and renovation process, when hopefully some of the pitfalls of the past will be able to be remedied.

The second and third phases of this study looked to develop a framework that could be used by international schools in order to determine, measure and justify their return on investment in their theatre space(s). Phase 2 identified the stakeholder pools that exist, as well as different indicators that may be important to international schools when examining for ways to measure their returns. Phase 3 took those indicators and attempted to describe them as outcomes or success criteria. Finally, an application method was proposed that schools could use to start their journey on documenting indicator outcomes in order to make informed decisions and choice into the future. A framework constructed on social return on investment principles was proposed as each school will have their own idea of what a good return on investment looks like.

References

Aris, M. P., Wright, P., & Pascoe, R. (2019). Negotiating effective arts education partnerships: School and industry professionals and the high school musical. *International Journal Of Education & the Arts*, *20*(16), 1–23. http://doi.org/10.26209/ijea20n16

Cooney, K., & Lunch-cerullo, K. (2014). Measuring the social returns of nonprofits and social enterprises: The promise and perils of the SROI. *Nonprofit Policy Forum*, *5*(2), 367–393. https://doi.org/10.1515/nfp-2014-0017

Birken, E. G. (2022, September 28). *Return on investment (ROI)* (B. Curry, Ed.). Forbes Advisor. https://www.forbes.com/advisor/investing/roi-return-on-investment/

Chung, L. (2023, September 22). *What is a good survey response rate for online customer surveys?*. Delighted. https://delighted.com/blog/average-survey-response-rate

Davey, D. J. (2010). *Musical theatre in secondary education: Teacher preparation, responsibilities, and attitudes* [Doctoral dissertation, Arizona State University].

Davies, L. E., Taylor, P., Ramchandani, G., & Christy, E. (2020). Measuring the social return on investment of community sport and leisure facilities. *Managing Sport and Leisure*, *26*(1–2), 93–115. https://doi.org/10.1080/23750472.2020.1794938

Emerson, J., & Cabaj, M. (2000). Social return on investment. *Making Waves*, *11*(2), 10–14. http://hdl.handle.net/2149/1028

Fernando, J. (2022, June 30). *Return on investment (ROI): How to calculate it and what it means* (J. Mansa & S. Kvilhaug, Ed.). Investopedia. https://www.investopedia.com/terms/r/returnoninvestment.asp

Gray, C., Lambert, K., & Jefferson, S. (2020). Fish out of water: Investigating the 'readiness' and proficiency of beginning drama teachers in Western Australian secondary schools.

Australian Journal of Teacher Education, 45(2), 65–80. http://dx.doi.org/10.14221/ajte.2020v45n2.4

Gray, C., Wright, P., & Pascoe, R. (2019). "They made me feel like a teacher rather than a praccie": Sinking or swimming in pre-service drama education. *Asia-Pacific Journal of Teacher Education, 47*(2), 193–207. https://doi.org/10.1080/1359866X.2018.1504279

Hazard, T. W. (1978). The school efficiency index: a measure of return on educational investment. *Educational Technology*, *18*(11), 48–50.

Home. (n.d.). ISC Research. Retrieved October 17, 2022, from https://www.iscresearch.com

International Schools Database. (n.d.). *International schools in China*. https://www.international-schools-database.com/country/china#

ISC Research (2023, August 9). *The most recent data on the international schools market for 2023. https://iscresearch.com/the-most-recent-data-on-the-international-schools-market-for-2023/*

ISC Research (2023, February). *Why more international schools keep opening.* https://go.iscresearch.com/why-more-schools-keep-opening

Jackson, A., & Mcmanus, R. (2019). SROI in the art gallery: Valuing social impact. *Cultural Trends, 28*(2–3), 132–145. https://doi.org/10.1080/09548963.2019.1617937

Jensen, R. (2010). The (perceived) returns to education and the demand for schooling. *The Quarterly Journal of Economics*, *125*(2), 515–548.

Kay, A. (2011). Prove improve account: the new guide to social accounting and audit. *Social Audit Network.*

Kim, H., & Choi, S.-H. (2023, January 30). *South Korea drops indoor anti-COVID mask mandate, infection fears linger.* Reuters. https://www.reuters.com/world/asia-

pacific/south-korea-drops-indoor-anti-covid-mask-mandate-infection-fears-linger-2023-01-30/

Kush, J. M., Badillo-goicoechea, E., Musci, R. J., & Stuart, E. A. (2022). Teachers' mental health during the covid-19 pandemic. *Educational Researcher, 51*(9), 593–597. https://doi.org/10.3102/0013189X221134281

Luma Institute (2012). *Innovating for people: Handbook of human-centered design methods.* LUMA Institute, LLC.

Martinez, L. & Hayes, C. (2013). Measuring social return on investment for community schools: a case study. *The Finance Project*.

Meyer Sound Constellation serves performances and technical education at Singapore American School. (2016, January 27). Meyer Sound. https://meyersound.com/news/singapore-american-school/

Ng, K. (2023, March 1). *Hong Kong ends mask mandate after 945 days.* BBC News. https://www.bbc.com/news/world-asia-china-64806987

Omasta, M. (2012). Landscape survey: Supplemental documents – facilities. *Teaching Theatre*, (Fall), 1–2.

Omasta, M. (2012). A survey of school theatre: A landscape survey of theatre education in United States high schools. *Teaching Theatre*, *24*(1), 8–29.

Pascoe, R., & Sallis, R. (2012). Perspectives on drama teacher education in Australia. *Asia-Pacific Journal for Arts Education, 11*(6), 127–158.

Peluso, J. L. (1970). *A survey of the status of theatre in United States high schools: Final Report.* Seton Hall University.

The principles of social value [Pamphlet]. (2022). Social Value International. https://www.socialvalueint.org/s/Principles-of-Social-Value.pdf

Psacharopoulos, G. (1972). Rates of return to investment in education around the world. *Comparative Education Review*, *16*(1), 54–67.

Public services (social value) act 2012. (2012, March 8). Legislation.gov.uk. https://www.legislation.gov.uk/ukpga/2012/3/enacted

Pyfrom, C. (2015). *Theatre safety in Louisiana secondary schools: A survey study* [Master's thesis, Louisiana State University]. LSU Digital Commons. https://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=4727&context=gradschool_theses

Rand, E. (2015). *High school theatre operations for architects, administrators, and academics.* CreateSpace Independent Publishing Platform.

Reiss, A. H. (1968). Who builds theatres and why? *The Drama Review: TDR*, *12*(3), 75–92. https://doi.org/10.2307/1144355

Ricket, A. (2022). *Valuing complexity in education-community partnerships: SROI as measurement framework for learning ecosystems* [Doctor's thesis, Ohio University]. https://etd.ohiolink.edu/apexprod/rws_etd/send_file/send?accession=ohiou165754703834 9744&disposition=inline

Robinson, H. W. (1964). Teaching facilities for theatre in secondar schools. *Educational Theatre Journal*, *16*(3), 212–219. https://doi.org/10.2307/3204662

Robinson, M. P. (1951). Don'ts for theatre builders. *Educational Theatre Journal*, 3(3), 249-254. https://doi.org/10.2307/3204066

Rothbaum, J., Eggleston, J., Bee, A., Klee, M., & Mendez-Smith, B. (2021, November 30). *Addressing nonresponse bias in the American community survey during the pandemic using administrative data.* United States Census Bureau. https://www.census.gov/library/working-papers/2021/acs/2021_Rothbaum_01.html

Sani, S. Z. B. A., & Institute of Strategic and International Studies. (2013). Return on investment in education: more for less. *ISIS Focus*, *8*, 1–3.

Seidel, K. (1991). Theatre education in United States high schools: A survey report. *Teaching Theatre*, *3*(1), 9–28.

Social return on investment. (n.d.). NEF Consulting. https://www.nefconsulting.com/training-capacity-building/resources-and-tools/sroi/

Social value act: Information and resources. (2021, March 29). Gov.uk. https://www.gov.uk/government/publications/social-value-act-information-and-resources/social-value-act-information-and-resources

Spier, V. (2015, November 3). *Singapore American School adopts pioneering Meyer Sound Constellation Acoustic System* [Press release]. https://www.sas.edu.sg/about-us/publications-and-media/press-releases

Strand Electric (1966). *The design of drama spaces in secondary schools.* https://www.theatrecrafts.com/archive/documents/designofdramaspacesinsecondaryschools1966.pdf

Watson, K. J., Evans, J., Karvonen, A., & Whitley, T. (2016). Capturing the social value of buildings: The promise of social return on investment (SROI). *Building and Environment*, *103*, 289–301. https://doi.org/10.1016/j.buildenv.2016.04.007

Westphal, A., Kalinowski, E., Hoferichter, C. J., & Vock, M. (2022). K-12 teachers' stress and and burnout during the covid-19 pandemic: a systematic review. *Frontiers in Psychology, 13*. https://doi.org/10.3389%Ffpsyg.2022.920326

Winfield, J. D., & Paris, J. H. (2022). A mixed method analysis of burnout and turnover intentions among higher education professionals during covid-19. *Journal of Education Human Resources*. https://doi.org/10.3138/jehr-2023-0048

Wright, P., & Gerber, R. (2004). Competency in Australian drama teachers: Mapping the Terrain. *NJ (Drama Australia Journal)*, *28*(2), 55–67.

Zappala, G. & Lyons, M. (2009). Recent approaches to measuring social impact in the third sector: an overview. *The Centre for Social Impact*, Background Paper (6).

Appendix A: Consent Form for Electronic Questionnaire

RADFORD UNIVERSITY

Radford University Cover Letter for Internet Research
First page of the survey

You are invited to participate in a research survey, entitled "School Theatres: Building a Framework for Maximizing Return on Investment." The study is being conducted by John Black (jblack30@radford.edu), a graduate student and Joan I. Dickinson, Professor in the (jidickins@radford.edu) Design Department of Radford University, Box 6967, Radford, Virginia 24142.

The purpose of this study is twofold: first, to examine the status of international school theatre facilities available, theatre staff demographics and qualifications, and theatre facility programming; and second, to explore the indicators that justify return-on-investment. Design thinking methods will be used to assist in identifying and measuring indicators and evaluating international school theatre return-on-investment. Your participation in the survey will contribute towards the first purpose of this study, which is to better understand the status of theatres in international schools. We estimate that it will take about 15-20 minutes of your time to complete the questionnaire. You are free to contact the investigators at the above address and emails to discuss the survey.

There are no anticipated risks from participating in this survey greater than everyday use of the Internet.

The research team will work to protect your data to the extent permitted by technology. It is possible, although unlikely, that an unauthorized individual could gain access to your responses because you are responding online. This risk is similar to your everyday use of the Internet. No personally identifiable information will be gathered on the survey including, but not limited to, personal name, school name, IP address, or any other tracking data. A limited number of research team members will have access to the survey data during data collection.

Your participation in this survey is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time without penalty. If you wish to withdraw from the study or have any questions, contact the investigator listed above. If you choose not to participate or decide to withdraw, there will be no impact on you.

If you have any questions, please call Joan Dickinson (540-818-1669) or send an email to jblack30@radford.edu and jidickins@radford.edu.

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or

have complaints about this study, you should contact Dr. Jeanne Mekolichick, Institutional Official and Associate Provost for Research, Faculty Success, and Strategic Initiatives, jmekolic@radford.edu, 540.831.6504.

If you agree to participate, please select "I agree" below and continue to the next page.

Otherwise, you may close this window and disconnect from the survey.

Thank you,

John Black

Appendix B: Electronic Questionnaire Questions

Question Page 1: General School Demographics

1. In what region is your school located?
   () Asia Pacific
   () Southeast Asia
   () Australia
   () Europe
   () Middle East
   () Africa
   () North America
   () South America
2. What grade levels does your school offer? (Check all that apply)
   () Early Childhood (ages 2 – kindergarten)
   () Primary (grades 1 – 5)
   () Middle (grades 6 – 8)
   () High (grades 9 – 12)
3. Approximately how many students are enrolled in your school across all grade levels?
   () Less than 500
   () 501 – 1,000
   () 1,001 – 1,500
   () 1,501 – 2,000
   () 2,001 – 2,500
   () More than 2,500

Question Page 2: Features of the Theatre Space(s)

1. Which of the following best describes your school's performance space(s)? (Check all that apply)
   () Classroom with seats removed
   () Combination gym and auditorium (gymtorium)
   () Combination cafeteria and auditorium (cafetorium)
   () Dedicated theatre space
   () We rent local performance spaces
2. If your school has a dedicated theatre space, how many dedicated spaces do you have?
   () Not applicable
   () 1
   () 2
   () 3
   () 4+
3. What is the seating capacity of your largest theatre space?
   () Not applicable
   () Under 200 seats

() 201-400 seats
() 401-600 seats
() 601-800 seats
() 801-1000 seats
() 1000+ seats

4. Which of the following features do any of your theatre spaces have? (Check all that apply)
   () Dedicated scene shop
   () Dedicated costume shop
   () Dedicated change rooms
   () Dedicated green room
   () Automated orchestra pit (hydraulic or other)
   () Manual orchestra pit
   () Motorized revolve
   () Trap room
   () Full-size fly loft
   () Partial fly loft
   () Manual fly system
   () Motorized fly system
   () Loading dock
   () Catwalks
   () Follow spot room
   () Other: _____
5. Which of the following audio equipment do any of your theatre spaces have? (Check all that apply)
   () Analog audio console
   () Digital audio console
   () Digital audio network (Dante, AVB, MADI, etc.)
   () Less than 10 wired microphones
   () More than 10 wired microphones
   () Less than 10 wireless handheld microphones
   () More than 10 wireless handheld microphones
   () Less than 10 actor bodypack microphones (headset, wig, or over-the-ear)
   () More than 10 actor bodypack microphones (headset, wig, or over-the-ear)
6. Which of the following lighting equipment do any of your theatre spaces have? (Check all that apply)
   () Digital lighting console
   () Less than 50 lighting instruments
   () 50-100 lighting instruments
   () More than 100 lighting instruments
   () Moving yoke automated lighting instruments
   () Moving mirror automated lighting instruments
   () LED conventional lighting instruments
   () LED automated lighting instruments
   () Less than 2 follow spots

() More than 2 follow spots
() LED follow spots

7. Please rate the quality of the following areas of the theatre spaces on a scale of 1-5 (1=none, 2=poor, 3=fair, 4=good, 5=excellent).
   () Lighting system
   () Storage space
   () Sound system
   () Wing space
   () Lighting instrument storage
   () Dressing rooms
   () Lighting/sound control room
   () Orchestra pit
   () Fly space
   () Scene Shop
   () Lobby space
8. Indicate the number of years since your principal theatre space was constructed or underwent major renovation:
   () 1-4 years ago
   () 5-9 years ago
   () 10-14 years ago
   () 15-19 years ago
   () 15-19 years ago
   () 20-29 years ago
   () 30-39 years ago
   () NA

Question Page 3: Programming of the Theatre Spaces

1. What is the average number of drama productions your school presents annually in each category (1, 2, 3, 4 or more, none, NA):
   (a) Musical drama
   (b) Full length play
   (c) One act plays
   (d) Plays for pre-secondary school children
2. Indicate the number of performances you hold for each production:
   () 1-2
   () 2-3
   () 3-5
   () 5-7
   () 7 or more
   () N/A
3. What is the average number of music concerts or recitals your school presents annually in each category (less than 5, 5-10, 10-15, more than 15, none, NA):
   () Band ensembles
   () Strings ensembles

() Choral ensembles
() Recitals (solo or chamber-size performances up to 16 players)
() Festivals

4. Are any of the drama productions or music concerts presented for the general public?
   () Yes
   () No
5. What is the average number of assemblies, presentations, or other non-performing arts/non-class events that your school holds in the theatre spaces each week:
   () 1-5
   () 5-10
   () 10-15
   () More than 15
   () NA
6. Does the school host outside events in the school's theatre spaces?
   () Yes
   () No
7. If so, how many of these events do you host on average each academic year?
   () Less than 5
   () 5-10
   () More than 10
8. Are the theatre spaces in your school used for regularly scheduled academic classes during the school day?
   () Yes
   () No
9. What is the average number of classes that your school holds in the theatre spaces each week:
   () 1-5
   () 5-10
   () 10-15
   () More than 15
   () NA

Question Page 4: Financing the Theatre Spaces

1. Does your school theatre space have an operating budget to covering expenses for supporting events?
   () Yes
   () No
2. If yes, what is your annual operating budget roughly in U.S. dollars?
   () Less than $1,500
   () $1,500 - $3,000
   () $3,000 - $5,000
   () $5,000 - $7,500
   () $7,500 - $10,000
   () $10,000 - $15,000

() $15,000 - $20,000
() $20,000 - $30,000
() More than $30,000
() NA

3. Does your school theatre space have a capital expenditure budget for regular replacement or addition of capital items?
   () Yes
   () No
4. If yes, what is your annual capital expenditure budget roughly in U.S. dollars?
   () Less than $1,500
   () $1,500 - $3,000
   () $3,000 - $5,000
   () $5,000 - $7,500
   () $7,500 - $10,000
   () $10,000 - $15,000
   () $15,000 - $20,000
   () $20,000 - $30,000
   () More than $30,000
   () NA
5. Does your school charge admission to performing arts performances (dramas, musicals or concerts)?
   () Yes – dramas and musicals only
   () Yes – concerts only
   () Yes – all performing arts performances
   () No
6. Do profits from admissions revenue go back into the theatre spaces for upkeep/maintenance, equipment purchases/replacement, covering operating costs, or staffing?
   () Yes
   () No
   () Sometimes
   () NA
7. Does your school rent out the theatre spaces to groups outside of the school?
   () Yes
   () No
8. If your school rents the theatre spaces, do school employees provide operational support?
   () Yes
   () No
9. Please indicate all the revenue streams that your school has designated for the theatre spaces:
   () Ticket revenue
   () School budget money
   () Fundraising events
   () Advertising program
   () Donations from individuals
   () Booster club

() Government Grants
() Theatre rental
() Corporate grants

Question Page 5: Staffing the Theatre Spaces

1. How many employees provide operational or managerial support for your theatre spaces (regardless of whether they teach classes):
   () 0
   () 1
   () 2
   () 3
   () 4
   () 5
   () More than 5
2. How many of those employees providing operational or managerial support do so full time (no teaching responsibilities):
   () 0
   () 1
   () 2
   () 3
   () 4
   () 5
   () More than 5
3. Of those who provide operational or managerial support, what is their educational background (check all that apply):
   () Undergraduate degree in theatre production / theatre technology field
   () Undergraduate degree in a non-production/technology field
   () Graduate degree in theatre production / theatre technology field
   () Graduate degree in a non-production/technology field
   () No college degree
4. Have any theatre staff members taken course work or professional development in theatre technologies in the last 3 years?
   () Yes
   () No
5. Does the school contract out theatre operational or managerial support rather than hire internally?
   () Yes
   () No
   () Sometimes
6. What kind of contract are theatre operational or managerial support staff on:
   () Local hire
   () Overseas hire
   () Both
   () N/A

Question Page 6: Open-ended Question

1. For the purpose of this study, return on investment is defined as the extent to which the theatre space(s) is meeting the goals/purposes for which it was designed or built, a measure of alignment. Please explain in detail how your school is or is not maximizing the return on investment in your theatre space(s) in your opinion.

Appendix C: Recruitment Email for Electronic Survey

Dear Sir/Madam,

My name is John Black, and I am a graduate student at Radford University. I am currently working on my master's thesis where my research will examine the status of international school theatre facilities, as well as indicators of return-on-investment of those facilities.

I am recruiting as many schools as possible to participate in an online survey to examine the status of theatre facilities existing in international schools. As such, I am asking you to please forward the message below to your organizations' member schools.

If you have any questions, I can be reached at jblack30@radford.edu

I appreciate your time and willingness to pass this on to your member schools as it will greatly impact my project.

Thank you,

John Black

---------- MESSAGE TO FORWARD BELOW ----------

Dear Sir/Madam,

My name is John Black, and I am a graduate student at Radford University. I am currently working on my master's thesis where my research will examine the status of international school theatre facilities, as well as indicators of return-on-investment of those facilities. I believe that your school will be able to help with this study.

I am recruiting as many participants as possible to complete an online survey. Participants may be any employee at your school who either has primary responsibility of or is most knowledgeable of your schools' theatre space(s), regardless of position. This may be a teacher, theatre manager, IT staff, facilities staff, or other employee.

I am asking that you please forward this email to the appropriate employee in your school as described above. It is important that only one employee from your school complete the survey to prevent data duplication. Therefore, please only forward the survey link to the employee meeting the above description.

Below is a link to the electronic survey that will be available to be completed any time before [DATE]. The survey takes approximately 15-20 minutes to complete.

Link to survey: [SURVEY LINK]

If you have any questions, I can be reached at jblack30@radford.edu.

I appreciate your time and willingness to pass this on as it will greatly impact my project.

Thank you,

John Black

Appendix D: Stakeholder Map

Stakeholder Map

Definition: Return on Investment (ROI)

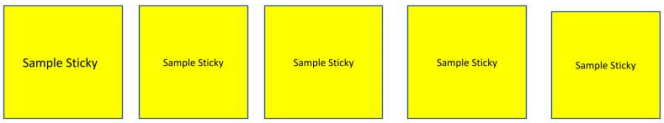
For the purpose of this study, return on investment (ROI) will be defined as the extent to which the theatre space(s) is meeting the goals & purposes for which it was designed or built and includes both financial and social return on investment (SROI)* returns; a measure of alignment.

**Social return on investment is a framework that expresses intangible value (investment returns) in monetary terms (such as social, environmental, and other non-financial returns).*

Instructions

The stakeholder map is the first of two design thinking strategies that will be used to understand how international schools can measure return on investment. The first step is to understand all the individuals invested in the theatre space(s) and to do this, a comprehensive stakeholder map will be created.

Please copy-and-paste the provided digital sticky-notes to add stakeholders that you believe are invested in the theatre space(s) in international schools. Do not worry about the placement of the sticky-note. It is possible that not all stakeholders will be represented at all schools, but the goal is to identify as many stakeholders as possible.



Appendix E: What's on your Radar Instrument

What's on Your Radar?

Definition: Return on Investment (ROI)

For the purpose of this study, return on investment (ROI) will be defined as the extent to which the theatre space(s) is meeting the goals & purposes for which it was designed or built and includes both financial and social return on investment (SROI)* returns; a measure of alignment.

> **Social return on investment is a framework that expresses intangible value (investment returns) in monetary terms (such as social, environmental, and other non-financial returns).*

Category Descriptions

Program
Consider all the possible programming uses for the theatre facility. What types of events are held in the space? Is it used to hold classes? How many events each day will be held? How many performances annually and what types of performances should be held? Will the space be used for non-school related events, and if so, how often and what types? Will the space be used to host community or outside events, and if so, how often and what types?

People
Consider all the possible people that are impacted by or experience the theatre facility. How is the facility staffed and supported? What types of positions are there? Who will have access to the facility? How will students experience and interact with the facility? What about parents and community members?

Features
Consider all the possible features of the theatre facility. What mechanical systems, lighting systems, audio systems and capabilities does it have? What is the seating capacity? What production support areas are included? Is the space flexible and reconfigurable? Is there access for students, parents, community members, etc. with special needs?

Finance
Consider all the possible finances related to the theatre facility. How will the theatre space be financially supported? What revenue streams will exist? What bugets need to be in place to support operations, maintenance and upkeep? Who will manage the finances, prepare annual budgets, and plan strategically for the long-term financial sustainability of the space?

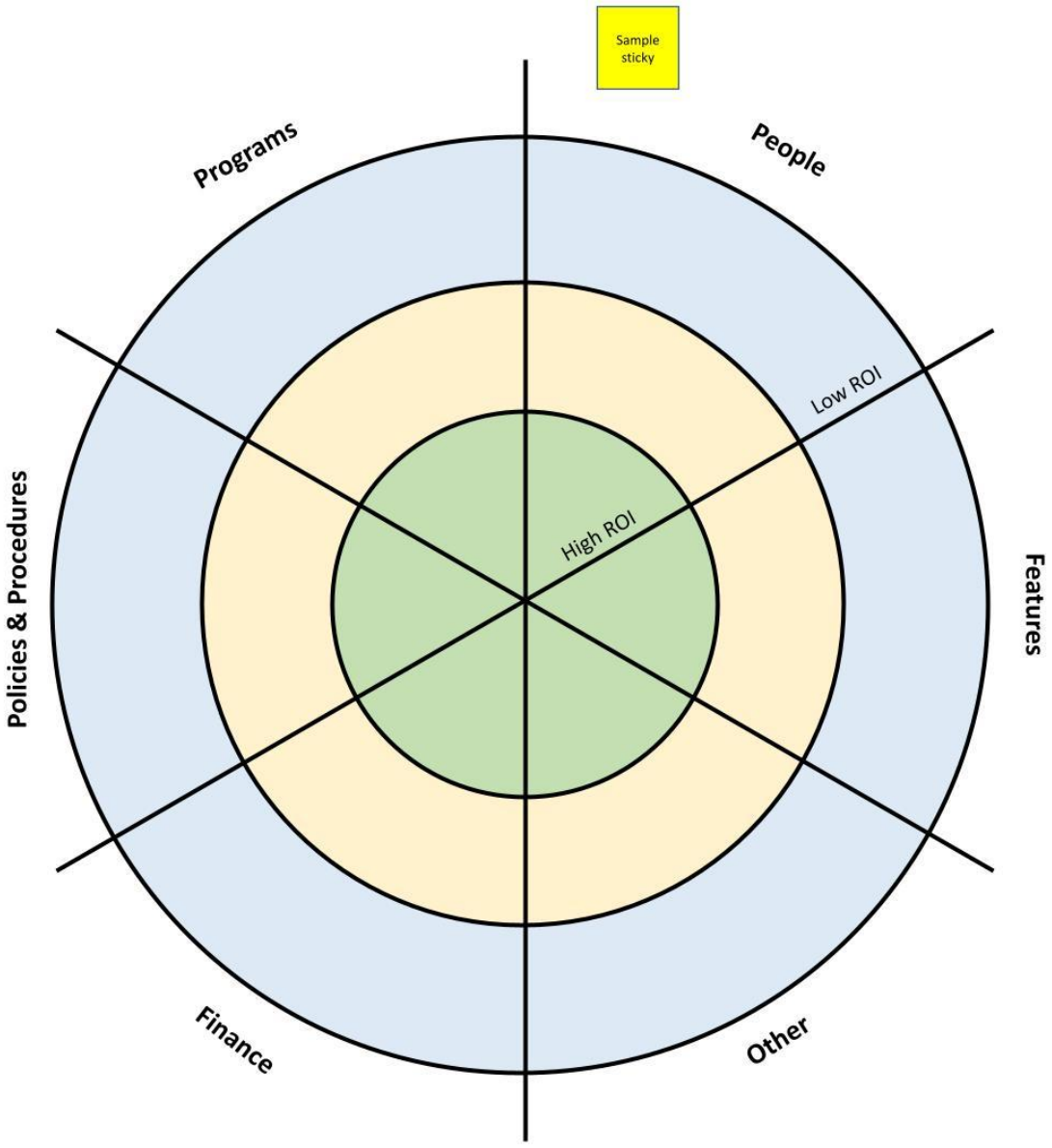
Policies & Procedures
Consider all the possible policies and procedures necessary for a theatre facility. What safety, access, acceptable use, and other guidelines are needed? How is access managed? What systems need to be in place for scheduling, ticketing, equipment/support planning, etc. are needed for daily operations?

Other
Please use the Other section to capture any ideas you may have that do not fit directly into one of the other provided categories.

What's on Your Radar?

Instructions

Please copy-and-paste the provided digital sticky-note to add as many items to the radar as you want that you believe indicate various levels of the return on investment in your schools' theatre space(s). Descriptions of each category are included in the instructions. Please note that items closest to the center of the diagram indicate a **high** return on investment, whereas items farther from the center of the diagram indicate a **lower** return on investment.



Appendix F: Recruitment Email for Phase 2

Dear [NAME],

My name is John Black, and I am a graduate student at Radford University. I am currently working on my master's thesis where my research will examine the status of international school theatre facilities, as well as indicators of return-on-investment of those facilities. I believe that your experiences will be able to help with this study.

I am recruiting participants for the second phase of my study, which is to understand and identify indicators of return on investment in international school theatre spaces. Participants may be a senior administrator and any staff member who has primary operational and or management responsibilities for the theatre space(s), regardless of assigned department, title, or whether teaching duties are assigned.

Participants will engage with two electronic, asynchronous instruments. The first will be a shared Stakeholder Map that all participants will contribute to. The second will be an individual instrument called What's on Your Radar, on which you will be able to plot items that indicate a high, medium, or low return on investment in six categories.

Participants will have 10 days to complete the two instruments, which should take no more than 20 minutes to complete. Below is a link to a consent form. Once provided, you will redirect to the two instruments.

Link to participate: [LINK TO SURVEY]

If you have any questions, I can be reached at jblack30@radford.edu.

I appreciate your time and willingness to participate as it will greatly impact my project.

Thank you,

John Black

Appendix G: Consent Form for Phase 2

RADFORD UNIVERSITY

Informed Consent – Design Thinking Methods
Electronic Consent

Title of Research: School Theatres: Building a Framework for Maximizing Return on Investment

Researcher(s): John Black, Graduate Student and Joan I. Dickinson, Professor, Department of Design, Radford University

You are asked to be a volunteer in a research study designed to understand and identify indicators of return on investment for international school theatres. You were selected as a possible participant because you have operational and/or management responsibilities for international school theatre(s) in a Korean-American Interscholastic Activities Conference (KAIAC), Asia Pacific Activities Conference (APAC), or Interscholastic Associate of Southeast Asian Schools (IASIS) member school. We ask that you read this form and ask any questions you may have before agreeing to be in the study. Participation is completely voluntary.

Purpose:
The purpose the study is to understand and identify indicators of return on investment for international school theatres. Participants will collaborate on a stakeholder map, providing understanding and insight into all the stakeholders invested in international school theatres, as well as an activity called What's on Your Radar, a design thinking method that will be used to identify indicators of return on investment. We are hoping for a minimum of 15 participants.

Procedures:
If you decide to participate in the study, you will receive an email with links and an overview of the procedures that you will be expected to complete. Participants will be asked to complete all activities within 10-calendar days of receiving the email and should take no more than 20-minutes.

The first link will take you to a shared document using Google Slides for a stakeholder map. All participants will be able to add stakeholders who would be invested in an international school theatre new build or renovation project. Understanding who the stakeholders are will help to identify indicators of return on investment as different stakeholders may hold different perspectives on what defines a good return on investment. The goal for the activity is to identify as many stakeholders as possible to ensure that all perspectives are captured.

The second link in the email will take you to the second activity using Google Slides called What's on Your Radar, that each participant will complete individually. What's on Your Radar is a design thinking method in which you will plot items according to personal significance. In this

case, you will be asked to plot indicators of a high-, medium- and low- return on investment in six pre-determined categories. Specific instructions and definitions of each category are provided on the first page of the activity.

There will not be any video or audio recording made during this phase of the study. Approximately 20 people from KAIAC, APAC and IASIS schools will be asked to participate in this study.

Risks or Discomforts:
There is no more risk than you may find in daily life.

Compensation to You:
Your participation in this workshop is voluntary and there is no compensation for your participation.

Benefits:
There are no direct benefits to you for participating in these activities. You can choose not to participate and, if you do decide to participate, you may choose to withdraw your participation at any point.

If you decide to participate, your responses will be kept private. If we present or publish the results of this study, your name will not be linked in any way to what we present.

Confidentiality:
The data collected in this study are anonymous. This means that not even the research team can match you to your data. All links to activities will be accessible without any login information required in order to ensure confidentiality.

Costs to You:
There is no cost to you for participating in the study.

Questions about Your Rights as a Research Assistant:
If at any time you want to withdraw your participation in the study, you may do so without penalty or loss of benefits by contacting: John Black (jblack30@radford.edu) or Dr. Joan Dickinson (jidickins@radford.edu or 540-818-1669. If you choose not to participate or decide to withdraw, there will be no impact to you.

If you have any questions now about this study, please ask before completing this web form.

If you have any questions later, you may talk with John Black (jblack30@radford.edu) or Dr. Joan Dickinson (jidickins@radford.edu or 540-818-1669).

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Dr. Jeanne Mekolichick, Institutional

Official and Associate Provost for Research, Faculty Success, and Strategic Initiative, jmekolic@radford.edu, 540-831-5114.

If you agree to participate, please insert your name and email address into the field below, click "I agree" and then "Submit".

Appendix H: Phase 2 Email to Confirmed Participants

Dear [NAME],

Thank you for consenting to participate in my research study. As a participant, you will complete two instruments, one collaboratively and one individually. Instructions for each instrument are provided on the front of each instrument and can be accessed using the links below:

Instrument 1: Stakeholder Map – [LINK]
The Stakeholder Map will be created collaboratively with all participants of Phase 2. Work can be completed asynchronously, and you are not required to schedule a specific time to participate.

Instrument 2: What's On Your Radar – [LINK]
The What's On Your Radar instrument will be completely individually by each participant.

Both instruments will be active for 10 days and you may stop and return to either instrument as many times as you would like while they remain available. Both instruments should take no more than 20 minutes of your time.

If you have any questions, I can be reached at jblack30@radford.edu.

I appreciate your time and willingness to participate in this study.

Thank you,

John Black

Appendix I: Recruitment Email #1 for Phase 3

Dear [NAME],

My name is John Black, and I am a graduate student at Radford University. I am currently working on my master's thesis where my research examines the status of international school theatre facilities. I am recruiting participants for the third phase of my study, which will be an in-person, design-thinking workshop held at Seoul Foreign School lasting around two hours. The goal for the workshop is to develop a prototype for measuring and evaluating return on investment. During the workshop, participants will be led through four design-thinking activities called Creative Matrix, Visualize the Vote, Round Robin, and Critique.

My goal is to be able to include as many participants as possible. I have identified three potential dates for the workshop:

Saturday, June 3 – 9:00 AM
Friday, June 9 – 3:00 PM
Saturday, June 10 – 9:00 AM

If you are interested in participating, please follow the link below to vote on the date that would work best for you. The workshop will be scheduled on the date receiving the greatest number of votes. Please submit your preferred dates by [DATE].

Indicate preferred date: [Google form link]

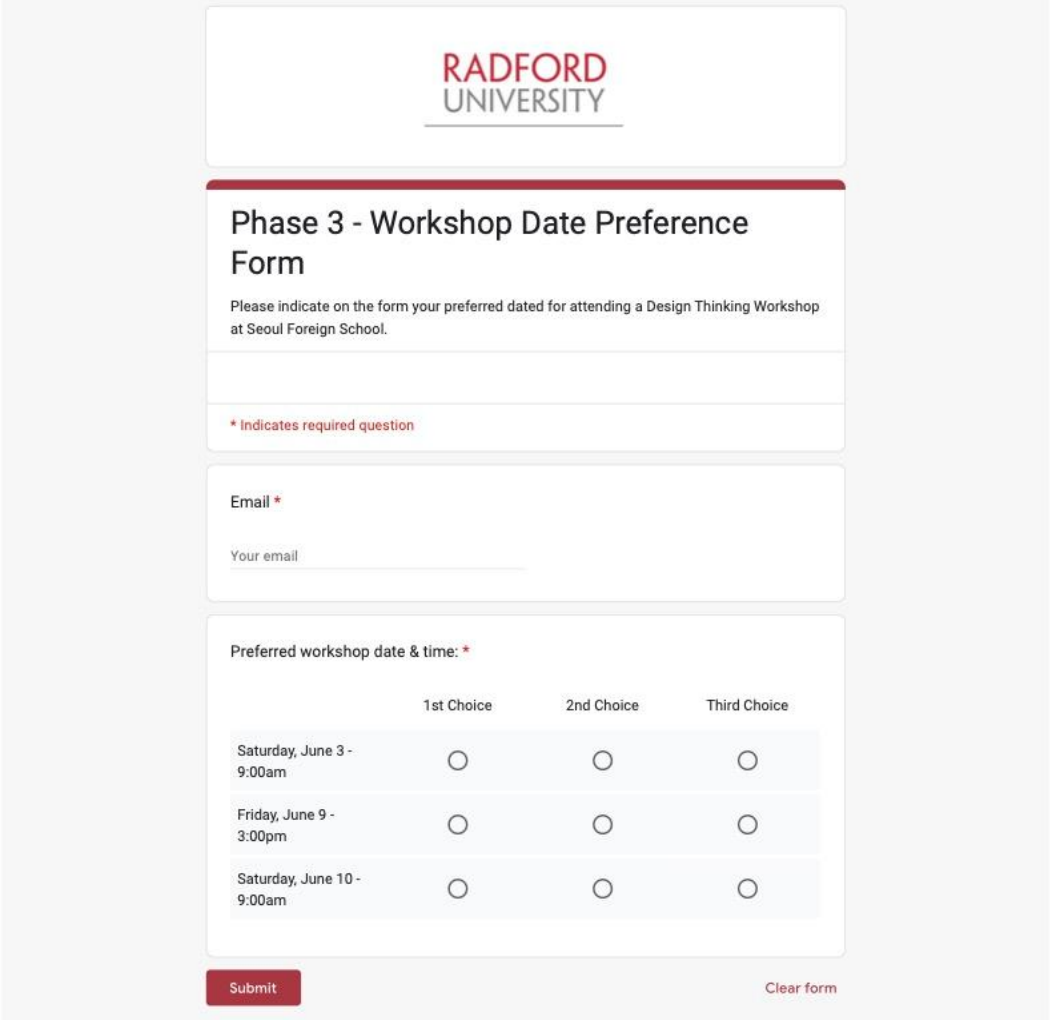
If you have any questions, I can be reached at jblack30@radford.edu.

I appreciate your time and willingness to participate as it will greatly impact my project.

Thank you,

John Black

Appendix J: Workshop Date Poll



RADFORD UNIVERSITY

Phase 3 - Workshop Date Preference Form

Please indicate on the form your preferred dated for attending a Design Thinking Workshop at Seoul Foreign School.

* Indicates required question

Email *

Your email

Preferred workshop date & time: *

	1st Choice	2nd Choice	Third Choice
Saturday, June 3 - 9:00am	○	○	○
Friday, June 9 - 3:00pm	○	○	○
Saturday, June 10 - 9:00am	○	○	○

Submit

Clear form

Appendix K: Email #2 for Phase 3

Dear [NAME],

Thank you for your willingness to participate in the workshop for my thesis. The following date/time collected the highest number of votes:

Location: **Seoul Foreign School – Black Box Theatre**
Date: **Friday, June 9**
Time: **3:00pm**

There is nothing that you need to prepare for the workshop – I will have all of the materials and guide you through the activities.

If you have any questions, I can be reached at jblack30@radford.edu.

I appreciate your time and willingness to participate as it will greatly impact my project.

Thank you,

John Black

Appendix L: Consent Form for Design Thinking Workshop

RADFORD UNIVERSITY

Informed Consent – Design Thinking Workshop
Electronic Consent

Title of Research: School Theatres: Building a Framework for Maximizing Return on Investment

Researcher(s): John Black, Graduate Student, and Joan I. Dickinson, Professor, Department of Design at Radford University

You are asked to be a volunteer in a research study designed to understand and identify indicators of return on investment for international school theatres. You were selected as a possible participant because you have operational and/or management responsibilities for international school theatre(s) in a Korean-American Interscholastic Activities Conference (KAIAC), Asia Pacific Activities Conference (APAC), or Interscholastic Associate of Southeast Asian Schools (IASIS) member school. We ask that you read this form and ask any questions you may have before agreeing to be in the study. Participation is completely voluntary.

Purpose:
The purpose of the workshop is to develop a prototype that will assist international schools on measuring and evaluating whether they are maximizing their return on investment in their theatre spaces. This workshop builds on the previous phase of the study which identified indicators of return on investment. Participants will be directed through several design thinking methods including Creative Matrix, Visualize the Vote, Round Robin, and Critique. We are hoping for 10-12 participants in the workshop.

Procedures:
If you decide to participate in the study, you will attend an in-person workshop at Seoul Foreign School on [DATE] beginning at [TIME]. At the beginning of the workshop, the student researchers will first present the findings of Phase 1 and Phase 2 of the study before starting in on the workshop methods.

The first activity is called Creative Matrix and is a method used for generating ideas. The student researchers will provide a white board with the matrix prepared. As a group, up to 4 indicators of return on investment from Phase 2 will be selected for the activity and written into the column headers. The rows will represent enablers and will have been preselected by the student researcher. The participant group will then be provided with sticky notes and will work individually on adding features or characteristics of a measurement tool at the intersection of each indicator. The goal will be to have ideas generated in every intersection of the matrix. About 15-minutes will be allotted for this activity.

Once the time is complete, the group will move into the Visualize the Vote activity. The student researcher will distribute colored stickers in two colors. One color will represent a detail vote and one color will represent an overall vote. Participants will be given one overall vote and two detail votes per indicator column. The student researcher will instruct all participants to spend time reading through the ideas generated and then add their stickers to the sticky notes. Around 10-minutes will be provided for this activity depending on the number of ideas generated.

After the time for voting is finished, the student researcher will identify those ideas with the most overall and detail votes and read those aloud to the participant group. The next activity will be a Round Robin, during which participants will work in groups to develop an idea for the prototype based on the ideas voted on. Participants will be broken up into groups of 3 or 4 depending on the total number of participants and everyone will be provided an activity worksheet. Each group will focus on one of the indicators from the creative matrix. During the first 3-minutes, all participants will write and/or draw an idea for a prototype. Once time is up, the worksheets will be passed to the next participant in the group. During the next 3-minutes, participants will detail out why the idea will fail. Once time is up, the worksheets will be passed to the next participant for the final round. During the next 3-minutes, participants will propose a solution to the idea addressing the concerns about why it would fail. After time is up, all the proposals for each indicator will be posted on a wall.

At this time a break will be given in the workshop.

The last activity will be a Critique. The student researcher will work through each indicator. First, the student researcher will read through all the proposals generated, the reason(s) they will fail and the proposed solutions. Participants will then be led through a critique for the proposals for that indicator. The student researcher will take notes through colored stickies representing positives, negatives, and suggestions. The activity will be complete once the critique has been done for all the indicators used in the round robin.

The workshop will conclude with the student researcher thanking participants for their time.

Risks or Discomforts:
There is no more risk than you may find in daily life.

Compensation to You:
Your participation in this workshop is voluntary, and there is no compensation for your participation.

Benefits:
There are no direct benefits to you for participating in these activities. You can choose not to participate and, if you do decide to participate, you may choose to withdraw your participation at any point.

If you decide to participate, your responses will be kept private. If we present or publish the results of this study, your name will not be linked in any way to what we present.

Confidentiality:
The data collected in this study are anonymous. This means that not even the research team can match you to your data. All links to activities will be accessible without any login information required in order to ensure confidentiality.

Costs to You:
There is no cost to you for participating in the study.

Questions about Your Rights as a Research Assistant:
If at any time you want to withdraw your participation in the study, you may do so without penalty or loss of benefits by contacting: John Black (jblack30@radford.edu) or Dr. Joan Dickinson (540-818-1669). If you choose not to participate or decide to withdraw, there will be no impact to you.

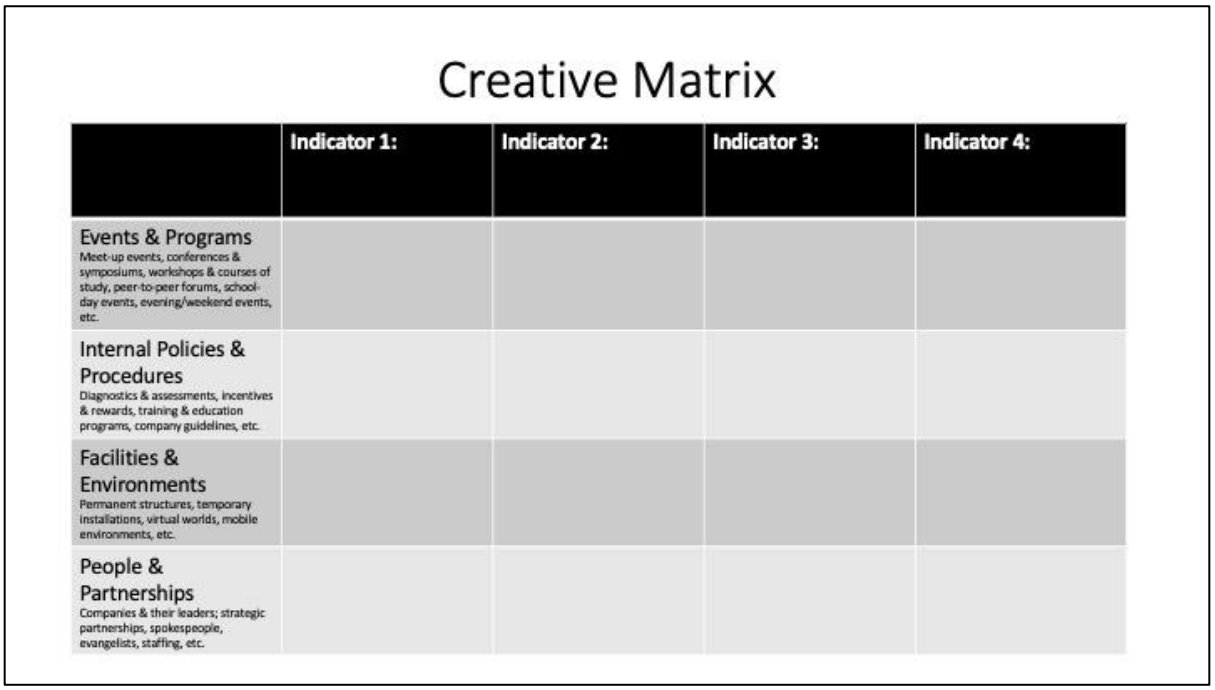
If you have any questions now about this study, please ask before completing this web form.

If you have any questions later, you may talk with John Black (jblack30@radford.edu) or Dr. Joan Dickinson (jidickins@radford.edu or 540-818-1669).

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Dr. Jeanne Mekolichick, Institutional Official and Associate Provost for Research, Faculty Success, and Strategic Initiative, jmekolic@radford.edu, 540-831-5114.

If you agree to participate, please insert your name and email address into the field below, click "I agree" and then "Submit".

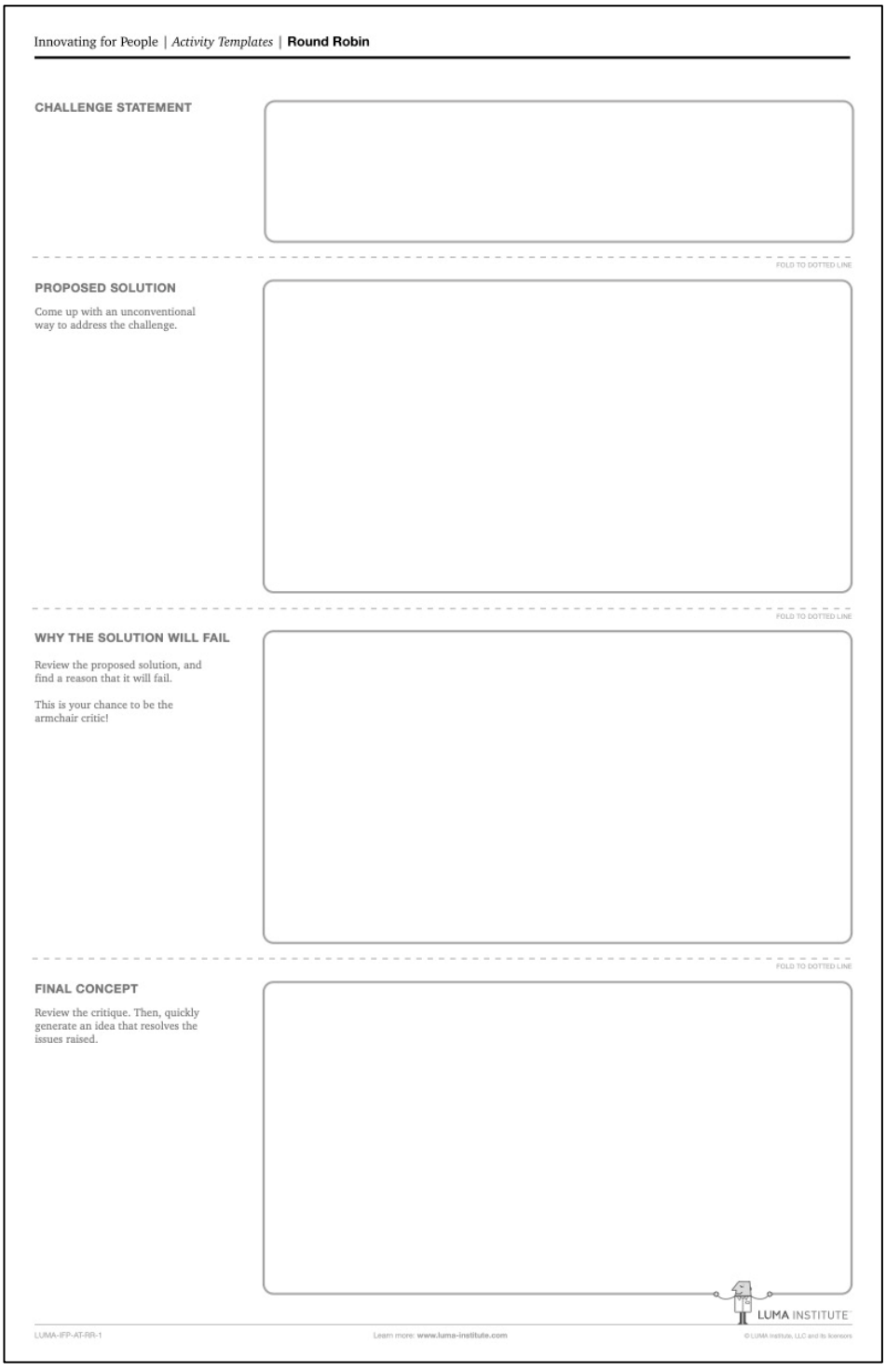
Appendix M: Template for Creative Matrix



Creative Matrix

	Indicator 1:	Indicator 2:	Indicator 3:	Indicator 4:
Events & Programs Meet-up events, conferences & symposiums, workshops & courses of study, peer-to-peer forums, school-day events, evening/weekend events, etc.				
Internal Policies & Procedures Diagnostics & assessments, incentives & rewards, training & education programs, company guidelines, etc.				
Facilities & Environments Permanent structures, temporary installations, virtual worlds, mobile environments, etc.				
People & Partnerships Companies & their leaders; strategic partnerships, spokespeople, evangelists, staffing, etc.				

Appendix N: Round Robin Worksheet



Innovating for People | *Activity Templates* | **Round Robin**

CHALLENGE STATEMENT

FOLD TO DOTTED LINE

PROPOSED SOLUTION

Come up with an unconventional way to address the challenge.

FOLD TO DOTTED LINE

WHY THE SOLUTION WILL FAIL

Review the proposed solution, and find a reason that it will fail.

This is your chance to be the armchair critic!

FOLD TO DOTTED LINE

FINAL CONCEPT

Review the critique. Then, quickly generate an idea that resolves the issues raised.

LUMA INSTITUTE

LUMA-IFP-AT-RR-1 Learn more: www.luma-institute.com

Appendix O: Responses from Questionnaire Q36 (Open-Ended)

For the purpose of this research study, return on investment is defined as "the extent to which a theatre space(s) is meeting the goals/purposes for which it was designed or built; a measure of alignment." Return on investment includes financial returns as well as social return (value generated that is not financial. For example, providing opportunities for students to learn scenic construction.).

Q36 – Please explain in detail how your school is or is not maximizing the return on investment in your theatre space(s) in your opinion.

During the school year, the school heavily programs most of the theatre spaces. There are times of the year when there could be more programmed in, and currently the theatres sit empty during the long breaks. Therefore, they could be used more to maximize the return on the space itself, but those break are not staffed due to contract terms, so in order to increate use, staffing would need to increase. As professionally-equipped spaces, there is a tie between facility-use and staff-support. To increase one, the school would need to increase the other (and also increase funds in as budgets are set based on school-year usage).
The performing arts facility on the Puxi Campus at Shanghai American School is exceeding expectations in terms of return on investment. It is the center of campus life and is home to more than just the theater and music programs. It also caters to our vibrant dance program and our audio engineering program via the in-house recording studio. On average it is occupied with activities five days a week.
N/A
The theatre's original design and current operation have realized its greatest values, such as high usage per semester, high security, low operating costs and the facilities that students learned or knew of through the performance , creating a solid foundation for future performance needs.
N/A
N/A
N/A
N/A
N/A
I think our school is maximizing the return of investment by the outcomes that the students learn of theater productions not only as an actors but in theater support team such as tech, sets, stage and costume.
N/A
N/A
HS tech theatre students have access every class to the theatre and learn how to operate everything. Having dedicated non teaching tech guys makes life awesome. Holding stupid meetings with 10 people in the theatre bothers me.
N/A
The design of the theatre is not great and it's difficult to perform with zero wings and a narrow corridor as our backstage. Yet we make productions work. Budgets for the technical requirements of the theatre are not prioritized. Budgets for productions are

substantial but our theatre manager has to apply/plead to spend money on updating the lighting system, microphones etc. About 5 years ago, the sound system was updated. 3 new microphones were recently bought but all the others need updating. We are hoping to use some money from the Drama classroom budget to buy new lights for the auditorium space. This comes from a different section of the school and budget allocation. We have only recently started charging admission for performances, but this money goes to a scholarship fund, not back into the theatre spaces. I think we could charge more and this cost get's split.

N/A

I teach in the Black Box but it is too small to host an audience larger than 25 people (max.). This space therefore is used for classroom performances, as well as exam pieces that are short. The Auditorium is our "other" theatre space, however, this is used frequently and consistently by the whole school for other events: COMUN, SATs, exams, assemblies, primary and secondary productions and performances, etc. As a theatre-space, which in my opinion it is not, we are not maximising the return.

N/A

N/A

After the pandemic due to Covid 19, we have experienced a big reduction in student population that has affected the overall budget. Due to changes in the program, Drama has changed the nature of its original purpose: performance. Students under the IB Programme are given other options equally challenging but different from what it once was.The IB coordinator could offer more information about this new focus of instruction.

We don't have a proper Theatre space, only the cafeteria/auditorium and a big open room space. For our annual productions, we need to rent a proper theatre space from outside. It's challenging to maximize the investment without a purpose built facility. Drama or theatre are not apart of our subjects and only run in our after-school activities program.

The multipurpose space is utilized primarily as a PE space and performance space for shows during the school year. We then use it in the afternoons for after-school activities and in the evenings it is "exchanged" with local sports clubs in exchange for services/visibility.

N/A

N/A

N/A

We are starting so for now, the operation of the theater space is exactly as it should be. Will be changing in the next 2 years, moving to profit based

I don’t want to give an answer here.

N/A

N/A

N/A

N/A

The school uses the space for rehearsals, performances and classes in both aspects of the Performing Arts. We are also in the process of rebuilding a program post pandemic so our calendar has been slowly evolving. We have added back many things this year and plan to do more next year including a play, IB music performances, tech

classes and more performance opportunities. There is hardly a week where the main performance space is not being used and our blackbox serves as a classroom but is currently under utilized as a performance space.

N/A

We use it more as an academic space than for theater

Our school is definitely attempting to maximize the return on investment.

NA

N/A

Our theatre is built in order to serve our school's performances and not for external renting purposes.

I am not sure my data will help with your study, but it is certainly a helpful question set for me to share with my board. I am the principal of an international secondary school with a background in music and theater. As we begin to build our performing arts program, I am advocating for our new building being built to have a performing arts space, and your questions give a reference to them of what other schools are doing.

Basically, It will be great if we can produce some events that have a high artistic value so we could offer this to the community where geographically we are inserted, but the inner operation (meaning the regular school hours) takes almost all of the human resources and more importantly, time available to do so. Therefore time available to do external events is almos inexistent.

My opinion is that it is used for too many non performing arts related (workshop/PD) events

N/A

the return om the investment is the confidence and capacity developed by students who are expected to perform from a very young age and are expected to be actively involved in the arts

The theatre was constructed in 1998 and has not been refurbished since then. Students who are enrolled in drama classes or drama club have the chance to learn how to use all the equipment in the control booth. I am not sure what the original purpose of the building was but it gets fairly good use from assemblies, graduation ceremonies, plays, musicals and concerts. We could be doing more to expose even more students to the performing arts and renting the space out to more groups. We are looking into refurbishing the tech soon but this requires a lot of fundraising as there are no dedicated funds for this.

There are some problems with the space with regards to how technology functions and it needs working on before the school can fully utilize the space in my my opinion. Then they could look at hiring it out for conferences etc. It is more of a conference space than a practical theatre space.

N/A

Our current theatre tech has no training or experience managing or using theatre equipment. Because of this the space is not being used to its fullest capabilities. After 10 years, equipment is also reaching the end of its life and needs to be replaced, but there is no dedicated budget for these large investments.

Positively, the school is not concerned with trying to make money on productions. There is a great deal of money invested in productions, allowing for a high quality

performance, with the knowledge that student participation and experience is allows for a strong social return and community development.

Appendix P: Stakeholder Map Digital Stickies

School administration for parent talks, whole staff meetings, etc
Music department K-12, concerts, 6 times per year each
Drama – MS Musical, HS play and musical, possibly ES for musical
1 coordinator with partial oversight for theater (lights, sound).
Bi Weekly HS/MS Assemblies
Maintenance handled through Operations – no theatre budget at all
Work force for set up tear down etc is overtime guards only available at certains time of the day and night
Admissions and marketing – theatre is part of the tour of facilities
Parent community – They are pushing for another one as the current is sub-standard
Local and US based boards – recognize the need for updated facility
Activities coordinators for events such as IASAS opening and closing ceremonies, Awards night, graduation, grade level meetings
Dance Department – HS dance concerts 2x per year, plus venue for hosting guest workshops and masterclasses.
Visual Arts department – use of the lobby for art exhibitions.
Local performing arts companies who rent the space for performance events
Students – particularly performing arts students – who organize and produce their own performances
Local and host country staff who use the space for formal recognition events and end of year celebrations
School administration – for whole school PD sessions, town hall meetings, guest speakers.
English department for use of space during public speaking units.
Local Church group Sunday mass.
Student Life Pastor and Student Worship Teams
MYP/DP Testing Coordinators who use the space for group assessment
School administration – Hosting Teacher Meetings, Trainings, Inservice, Parent Meetings
Theatre Department – Two productions annually – student operated tech
Music Department – 12 concerts a year, including musical productions for younger years students
Theatre Faculty Advisors – using the set design portion of the area to facilitate student learning
Parent Community – Attending productions, concerts, and events
HS Clubs – Use the space to hold events (Karaoke night), record performances (Guardian Dance Crew)
Chaplains – 6 Sessions of chapel/assembly held weekly across the 3 divisions
Divisional Chaplains – Special/Spiritual Emphasis weeks held annually with outside performers and speakers visiting
PTO – Use the set design portion for preparing decorations for events that occur in the off season of productions
AV Specialist – Operates and oversees scheduling of the space

Teaching Staff – Host awards ceremonies and classroom events when available – guest speakers

HS Counseling – Host events for students and for Career day speakers

ES Chaplain – host VBS yearly in the space

Divisional Admin – Use the space for assemblies, student meetings, etc.

MS/HS Praise band – used for rehearsals and perform during weekly chapels

HS Admin – Use the space as a holding area for HS students before school

Accrediting Orgs – Recognized the need for updates and the need for a space

Business Office – Oversees budgeting and facilities improvement

KFSF – (School Board) – oversees upgrades to facilities and long term planning

Appendix Q: Individual Stickies for What's On Your Radar

Programs

High ROI
Drama productions
Music concerts
MS/HS/VAPA/Creative Arts Showcases
Music Department
Drama productions
Theatre department
Programs, public concerts and performances
Medium ROI
Large assembly meetings
HS assemblies
Chapels/assemblies
SW PD sessions
Outside performances (rented space)
Visual arts exhibitions
Low ROI
Student initiated productions
End of year celebrations
Guest speakers
Core curriculum programs
Other Comments
It is an underused space and more programs could use it: technical theatre program, costume design, prop design

People

High ROI
Dance teacher
Theatre manager
Music department faculty
Theatre students
People staff and student use of the facility
Student use for classes, events, plays
AV specialist
Drama teacher
Facilities team
Medium ROI
Activities coordinator
Divisional admin
Chaplains
SW admin

Music teachers
Music students
Low ROI
Students
Host country staff
Business office
Local community
Visual Art Teachers
Teaching Staff

Features

High ROI
Features, mechanical systems, lighting
Seating capacity for entire division
Fly rail system
GrandMA lighting console
Live video editing system
Sound console
Remote mixing
Auto mic mixing functionality
Front/rear projection
Medium ROI
732 seats
Motorized lighting
Adjacent construction area
Simplified power on system
Dimmable house lighting
Large backstage wing space
Lighting dummy sheet (touchscreen/Fleenor pre10)
Fly space
Low ROI
2 trap areas
Pit – limited accessibility
Other Comments
Underutilized light board, sound board, fly system, band pit, tech area, makeup room, storage areas

Policies & Procedures

High ROI
Scheduling priority list
Theatre manager
Accessibility
Scheduling

Sharing/borrowing of equipment
Flex hours for event staff
Medium ROI
Keycard accessible
Policies and procedures
Ticketing system for reservations and support
Other Comments
Poorly managed space. Noone here really knows how it runs. PAC manager is not a true manager. No oversight, no vision.

Finance

High ROI
Routine maintenance for lighting and sound system
Budget for opening and closing of pit
Finances; good long term financial planning
Budget for spike tape, glow tape, marley floor tape
Medium ROI
Admissions – improving tour quality
Theatre department
AV Tech budget for repairs, and consumables
Low ROI
Music department
Outside use of facilities
Other Comments
No online ticketing, space is not exploited well for its financial potential

Other

Low ROI
Low ROI as a teaching space

Appendix R: Creative Matrix Results

Discussion notes are included in *italics*.

	DRAMA PRODUCTIONS
EVENTS & PROGRAMS	• # of students involved in theatre productions, including: actors, musicians, stage managers, tech, backstage, etc. • Opportunities for all student ages to be involved at some point in the year • Feedback from community; positive influence on community morale and unity • Attendance / ticket sales from community members – teachers, staff, students & parents • Audience commitment to attend throughout a season *General comment: specific numbers for all of the above cannot be defined as they will be different depending on the size of school, size of program, quantity of productions, etc. Each school would need to define for themselves what "high return on investment" looks like for each category.*
INTERNAL POLICIES & PROCEDURES	• School commitment to school-wide program and director *School shows commitment by offering drama performances / opportunities across all grade levels and employs a full-time director* • Budget for annual productions that allows for excellence • Contracts to be upheld by people involved *For support people with other responsibilities (such as teaching, independent contractors, etc.), policies need to be in place to ensure contract terms and expectations are fulfilled for the benefit of the students*
FACILITIES & ENVIRONMENT	• Variety of facilities supporting diverse productions and cast sizes • Maintaining an environment where stage and equipment doesn't suffer environmental damage • Maintaining a stock of materials for use in set / props / costumes
PEOPLE & PARTNERSHIPS	• How can we maximize a space's usage throughout the entire calendar year? *A space will not be fully utilized if only used for drama productions. This question asks how the space can be fully utilized without negative impact to drama performances / rehearsals.* • Large parent involvement – drama mama's and administrative buy-in

	SCHEDULING
EVENTS & PROGRAMS	• Equitable scheduling for all, but on an as-needed basis • In a place with multiple venues, rotate events to ensure the maximum use of spaces • Attention to balance and detail in schedule which includes all sections • Allowance for multiple mainstage productions, music prod., dance perf. and more • Appropriate rehearsal time schedules
INTERNAL POLICIES & PROCEDURES	• Having appropriate changeover / blackout periods *Protecting the needs of setting up / clearing out performance programs from the facilities – adequate time should be built into the calendar to allow for these needs.* • Collaborative meeting for scheduling including all sections • A centralized communication / person for scheduling use of spaces *Such as a theatre manager, facility director, etc.* • Group conversation setting the calendar so some groups aren't left with fewer options / less access
FACILITIES & ENVIRONMENT	• Schedule MASTER who oversees the schoolwide facility bookings • Space & resources are available for student learning
PEOPLE & PARTNERSHIPS	• All stakeholders are part of the calendaring process • Balance between school section use

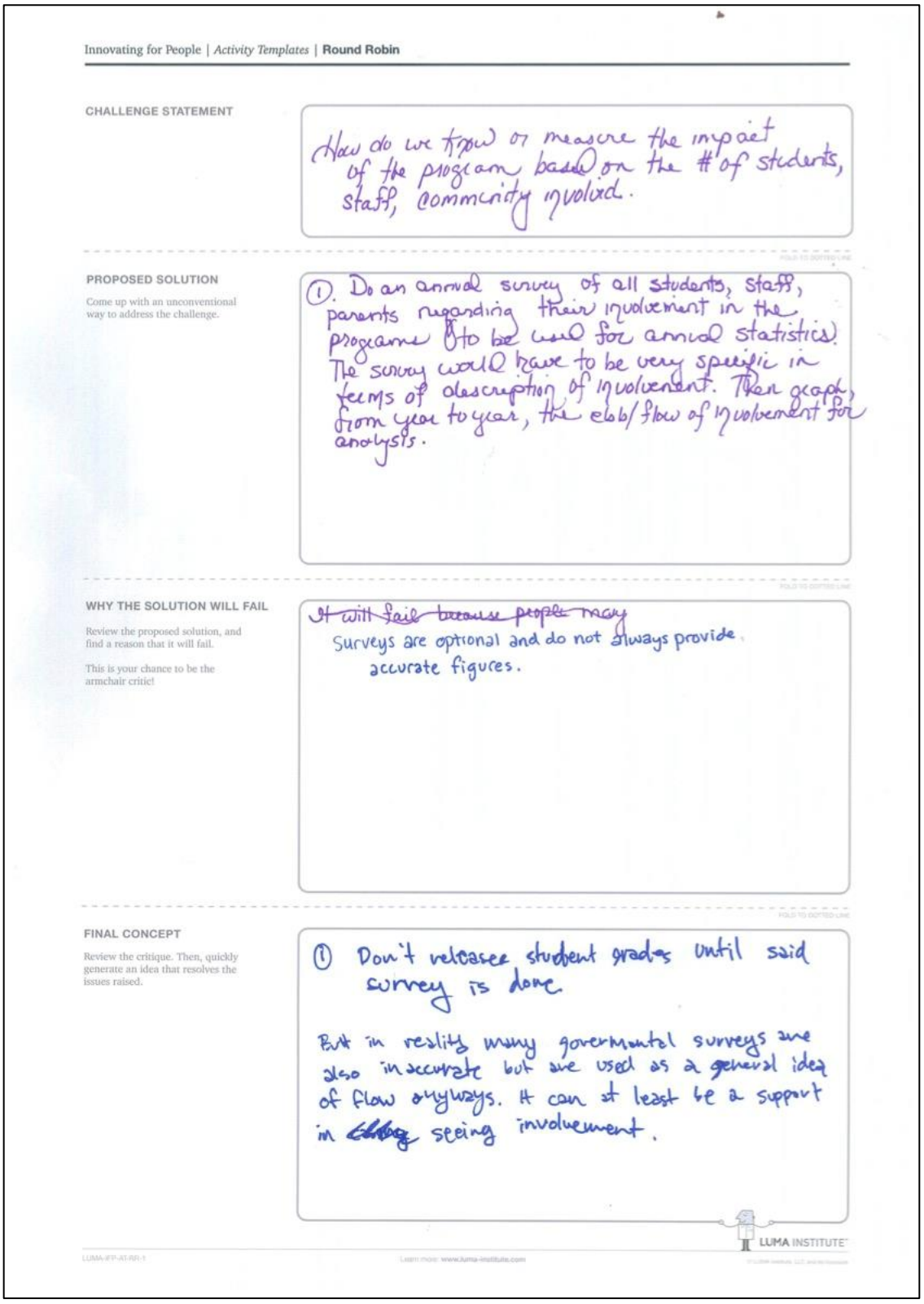
	ACCESSIBILITY
EVENTS & PROGRAMS	• Some compulsory community offerings in addition to the select / elected / optional offerings *For example, some drama productions that are audition-based and extra-curricular, while also having some that are produced during the school day and compulsory for a group of students* • DEIJ awareness in performances in regards to racial equality, etc.
INTERNAL POLICIES & PROCEDURES	• Differently-abled seating and performances • Training in accessibility needs & unseen disabilities are important
FACILITIES & ENVIRONMENT	• How are spaces "ADA" compliant? *Or the equivalent in the country that the school operates.* • Use of spaces in terms of students with disabilities • Differently-abled people being able to easily access spaces *Especially the stages themselves so that students with different abilities are able to participate as performers.*

PEOPLE & PARTNERSHIPS	• Approval process for space usage is not held with just one person *Particularly if the person is a part of a specific department (rather than a school-wide advocate) to avoid a particular program / department from claiming ownership of the space.*

	GOOD FINANCIAL PLANNING
EVENTS & PROGRAMS	• Based on a policy to do what benefits students, not to make money • Budget established yearly and transparency in terms of budget
INTERNAL POLICIES & PROCEDURES	• Budget is a zero-based budget • Transparent budget process • Budget process is timely • Updating list of potential needs/wants for future discussions
FACILITIES & ENVIRONMENT	• Facilities upkeep is based on a sound plan • Excellent care of facilities as well as updating of equipment • Budget for maintaining / upgrading / replacing
PEOPLE & PARTNERSHIPS	• People feel their compensation or resources are clearly communicated, somewhat fair, and based on confirmed realities or figures • How can a space be used as a "for profit" space? *Some school theatres are unused during certain periods of the year (school holidays / breaks, some weekends / Sundays, etc.). How can they be put to use to create a revenue stream, what would that look like and how would they be supported?*

	STAFF / STUDENT USE (ACCESS)
EVENTS & PROGRAMS	• Arts and non-arts events occur in the spaces
INTERNAL POLICIES & PROCEDURES	• Clear and consistent way to request event support
FACILITIES & ENVIRONMENT	• Open spaces with basic tech w/ no need for supervision for student use
PEOPLE & PARTNERSHIPS	• Availability for student supervision

Appendix S: Round Robin Results



Innovating for People | *Activity Templates* | **Round Robin**

CHALLENGE STATEMENT

How do we know or measure the impact of the program based on the # of students, staff, community involved.

PROPOSED SOLUTION

Come up with an unconventional way to address the challenge.

① Do an annual survey of all students, staff, parents regarding their involvement in the programs (to be used for annual statistics). The survey would have to be very specific in terms of description of involvement. Then graph, from year to year, the ebb/flow of involvement for analysis.

WHY THE SOLUTION WILL FAIL

Review the proposed solution, and find a reason that it will fail.

This is your chance to be the armchair critic!

~~It will fail because people may~~ Surveys are optional and do not always provide accurate figures.

FINAL CONCEPT

Review the critique. Then, quickly generate an idea that resolves the issues raised.

① Don't release student grades until said survey is done.

But in reality many governmental surveys are also inaccurate but are used as a general idea of flow anyways. It can at least be a support in ~~doing~~ seeing involvement.

LUMA INSTITUTE

Innovating for People | *Activity Templates* | **Round Robin**

CHALLENGE STATEMENT

How might we know that communication and scheduling is centralized?

PROPOSED SOLUTION

Come up with an unconventional way to address the challenge.

Indicators of success:

- all community members know who to contact for space/resource use
- plans/confirmed events are easily known + accessible by stakeholders
- available resources are described in detail in a public/semi-public location (measurements/mics/speakers/etc)

WHY THE SOLUTION WILL FAIL

Review the proposed solution, and find a reason that it will fail.

This is your chance to be the armchair critic!

~~People~~ Technologically disadvantaged people exist and "never" can figure out who/where to contact and see availability.

FINAL CONCEPT

Review the critique. Then, quickly generate an idea that resolves the issues raised.

Develop an easy to read "flow-chart" that details who to communicate with on scheduling issues. Each section/department has a "tech advisor" that can assist with technology issues. ~~Should~~ Schedule has clickable resource links that detail what is available in each space with/& without support.

LUMA INSTITUTE

Innovating for People | *Activity Templates* | **Round Robin**

CHALLENGE STATEMENT

HOW DO WE MEASURE THE ~~ABILITY~~ ACCESSABILITY OF SPACES TO DIFFERENTLY-ABLE PEOPLE?

PROPOSED SOLUTION

Come up with an unconventional way to address the challenge.

When evaluating a building/space see what the local accessibility guidelines are (ADA equivalent). Realistically many buildings are hard-of access, so see how/if there is a way to support/fix this without having an entire space "demolished."

WHY THE SOLUTION WILL FAIL

Review the proposed solution, and find a reason that it will fail.

This is your chance to be the armchair critic!

This wouldn't work because for some buildings to be "in compliance" there would be major renovations needed. This doesn't necessarily mean "demolish" but could require major renovations.

FINAL CONCEPT

Review the critique. Then, quickly generate an idea that resolves the issues raised.

find alternative solutions that perhaps would not require full scale renovations. Examples: ramps into no accessible theatre spaces. Lifts on stairs could be used (such as the ones in subways/intown) in spaces that have no elevators. There are creative solutions that could be found. Depending on numbers of disabled students, perhaps need for major renovations could be reevaluated.

LUMA INSTITUTE

LUMA-IFP-AT-RR-1

Learn more: www.luma-institute.com

Innovating for People | *Activity Templates* | **Round Robin**

CHALLENGE STATEMENT

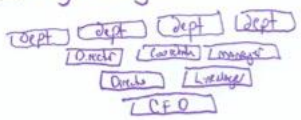
Budget -

How might we know the budget process is transparent

PROPOSED SOLUTION

Come up with an unconventional way to address the challenge.

The use of A reverse pyramid structure by department starting early in the school year. For example



This gives all stakeholders A voice in the process & Allows for easy flow of communication & changes to be made

WHY THE SOLUTION WILL FAIL

Review the proposed solution, and find a reason that it will fail.

This is your chance to be the armchair critic!

We cannot know for sure at lower levels of the pyramid ~~will tell the truth~~ that those at higher levels are being truly transparent particularly in a school with a strong distinction between admin and non admin. The pyramid structure is excellent; however, clear and precise communication would be needed at EVERY level in order for the messages to be conveyed accurately.

FINAL CONCEPT

Review the critique. Then, quickly generate an idea that resolves the issues raised.

Use of pyramid structure with accessible notes from the meetings could provide transparency and shared knowledge of what was approved/denied and why. follow up meetings or sharing of the notes would both ~~benefit~~ increase transparency

LUMA INSTITUTE

LUMA-IFP-A1-R1-1

Learn more: www.luma-institute.com