

# EARLY CHILDHOOD EDUCATION WAGE INCREASE 2022 PILOT PROJECT



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# PREFACE

United Way of San Antonio and Bexar County (United Way) unites the community to identify and solve our most critical issues. We are dedicated to improving people's lives and creating community-level change by leading cross-sector collaborations, advocating for public policy changes and investing in programs that prevent problems from happening in the first place.

United Way has a decades-long track record of investing in both alleviating poverty and early childhood education in San Antonio. In a cross-council collaboration between the Strong Individuals and Families and Ready Children Impact Councils, the Early Childhood Education Wage Increase Pilot Project sought to investigate the impact of increasing wages for early childhood educators in one center to measure the impact of increasing wages on the teachers' well-being and quality of early childhood education. This was a one-year project (January-December 2022) that was aligned with a comprehensive research agenda to measure the impact of both educator well-being and quality early childhood education.

The following report outlines the research on the impact of increasing wages for early childhood educators. The research findings presented have come from multiple sources including external researchers, United Way staff and an external business coach. The first portion of this report is the unedited findings of our external research partners. Additional findings discovered outside of our research partners' scope may be found at the end of this report as well as a short film that follows the stories of the pilot project participants. With the findings of contracted researchers, a business coach and United Way staff, a more comprehensive understanding of the impact of increasing wages has come into sight.


The completion of this study could not have been possible without the expertise and efforts of a few critical contributors. We would like to thank our Board Chair, Lisa Friel, who provided her time supporting our efforts in the creation of an early childhood education quality business model. Our thanks to R. Rene Escobedo and United Way volunteers for supporting this pilot project from its inception. Our gratitude also goes to Curtis Brewer and Bryan Duarte of Brewer Consulting for their research efforts. Thank you to Kumari Tapiador, referred to as "Leilani" in the final report and Center Owner and Director of Learning Tree Academy, for her willingness to go on the quality early childhood education journey with United Way and its partners. Finally, we would like to thank the incredible early childhood educators who graciously participated in the year-long research study...their gifts of time, knowledge and sharing will continue to inform our efforts in increasing quality for all early childhood education centers.

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# Early Childhood Education Wage Increase Pilot Project 2022: Final Report

February 19, 2023

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# EXECUTIVE SUMMARY OF FINDINGS

- Full-time employees generally earned 42-72% wage increases, with an average of 54%. This amounts to an average increase of about \$5.50/hour for most full-time employees. Part-time employees generally earned 28-50% wage increases, with an average of 43%, or a \$4.75 hourly increase for most part-time employees. The results of this study indicate the teachers at this center prior to the wage increase policy were approximately \$10,000 below the national median income level for early childhood educators. After the wage increase, we see they made approximately the national median income level for early childhood educators.
- Overwhelmingly participants reported their stress levels reduced and they had feelings of satisfaction and happiness as they were able to provide for their loved ones due to the wage increase.
- Teachers reported a greater sense of confidence, teamwork and motivation as they raised standards and implemented new pedagogy and curriculum in the context of the wage increase.
- The director explained her ability to engage in instructional leadership and hire and retain teachers had improved. She believes other centers need to experience a wage increase policy to see the benefits.
- The financial position for participants in the pilot has improved from January to December, particularly as it relates to financial security around paying for housing, transportation and food.
- Generally, the participants are satisfied and remain enthusiastic about their jobs and are less likely to want to leave for a better paying job.
- The Classroom Assessment Scoring System® (CLASS) assessment scores remained relatively consistent across the year of the wage increase.

# INTRODUCTION

In the diffuse system of early childhood education (ECE) the creation of sustainable equitable educational organizations is often understood as the purview of the individual education centers. However, there are policy level practices that have the potential to affect large segments of the early childhood education system. The purpose of this case study is to attempt to understand the how a wage increase policy affected a single ECE center.

Early childhood educators historically earn “unlivable wages” (Whitebook et al. 2014, p. 10). Therefore, even the most motivated and effective ECE teachers are unlikely to remain in the profession because of the challenges they experience from low wages (Boyd, 2013). Conversely, wage increases may lead to declines in financial hardship for basic living expenses (Collyer, 2020). This is particularly important, as ECE teachers who tend to have lesser financial hardship have been found to provide more positive classroom environments for children (King et al., 2016).

The purpose of this report is to detail the case study of one center that increased wages for all educators. Through the presentation of qualitative and quantitative data, we discuss the observed influence of the wage increase policy. Specifically, the report is divided into four parts. In part 1, we provide a quantitative snapshot of the wage increase. In part 2, we report the perceptions of the participants gathered through in-depth interviews regarding their understandings of the effects of the wage increase over the course of a year. In part 3, we analyze the results of three deployments of a well-being measure. In part 4, we examine the quality of the classrooms through the CLASS assessments gathered monthly. We conclude with a discussion of the four parts and suggest some implications. In the appendix we provide a description of the methodology employed in this study.



## Part 1: Quantitative Snapshot of Wage Increases

The following tables show a general snapshot of the hourly, bi-weekly, monthly and year-to-date wage increases for full and part time employees.

*Table 1.1 Full & part time hourly wages*

	Original Pay	New Pay	Difference	% Increase
<b>Full-time (n = 8)</b>				
<b>Mean</b>	\$10.44	\$15.75	\$5.31	51%
<b>SD</b>	\$0.82	\$1.04	\$0.75	9%
<b>Median</b>	\$10.25	\$15.50	\$5	48%
<b>Min</b>	\$9.50	\$15	\$4.50	42%
<b>Max</b>	\$12	\$18	\$6.50	68%
<b>Part-time (n = 3)</b>				
<b>Mean</b>	\$10.17	\$15	\$4.83	48%
<b>SD</b>	\$0.29	-	\$0.29	4%
<b>Median</b>	\$10	\$15	\$5	50%
<b>Min</b>	\$10	\$15	\$4.50	43%
<b>Max</b>	\$10.50	\$15	\$5	50%

Table 1.1 shows that full-time employees generally earned 42-68% wage increases, with an average of 51%. This amounts to an average increase of about \$5.31/hour for most full-time employees. Part-time employees generally earned 43-50% wage increases, with an average of 48%, or a \$4.83 hourly increase for most part-time employees. The full-time sample of employees is limited to eight because of incomplete data for some employees from January to December. These incomplete cases represent employees who departed before the pilot program was over or joined after it started. The wage increases for the 11 incomplete cases are summarized in table 1.2 below.

*Table 1.2 Incomplete full-time case hourly wages (n = 11)*

	Original Pay	New Pay	Difference	% Increase
<b>Mean</b>	\$11.20	\$15.27	\$4.07	38%
<b>SD</b>	\$1.55	\$0.90	\$1.36	18%
<b>Median</b>	\$11	\$15	\$4	36%
<b>Min</b>	\$8.75	\$15	\$2	15%
<b>Max</b>	\$13.50	\$18	\$6.25	71%

The summary statistics for the 11 incomplete full-time cases show a 15-71% range of increases, with 38% on average. The mean increase in pay for the 11 incomplete full-time cases was lower than the full-time cases in Table 1.1, at about a \$4 hourly increase per employee. We compared the mean wages using independent samples t-tests and did not find statistically significant differences in mean original pay or new pay means for complete versus incomplete cases. However, we did find a statistically significant difference in the mean difference in wages ( $t = 2.33, p = .03$ ). Since the incomplete cases represent participants who left after or joined before the wage increase was initiated, these results could indicate higher wage increases result in a more stable workforce. For example, we see a much lower minimum difference in the data for incomplete cases (\$2) as compared to a \$4.50 minimum increase for complete cases. Although it should also be noted the maximum increase difference for incomplete cases was \$6.25, which was higher than the \$5 maximum increase difference for complete cases. These mixed results may be reflective of the various reasons employees departed rather than the wage increase itself.

*Table 1.3 Summary Statistics for Wages by Pay Period*

	Mean	SD	Median	Min	Max
<b>FT (n = 8)</b>					
<b>Old Wages</b>	\$776.23	\$141.39	\$788.48	\$248.26	\$1,137.84
<b>New Wages</b>	\$1,171.28	\$206.35	\$1,182.68	\$363.30	\$1,722.18
<b>Difference</b>	\$395.05	\$82.18	\$387.27	\$115.05	\$616.29
<b>% Difference</b>	51%	9%	47%	39%	69%
<b>PT (n = 3)</b>					
<b>Old Wages</b>	\$569.61	\$94.81	\$569.56	\$223.70	\$899.06
<b>New Wages</b>	\$839.70	\$136.29	\$835.73	\$336.80	\$1,289.85
<b>Difference</b>	\$272.51	\$44.78	\$274.90	\$113.10	\$390.79
<b>% Difference</b>	48%	3%	50%	43%	51%

Table 1.3 shows full-time employees saw an average of about \$400 more per pay period, while part-time employees received approximately \$273 more on average per pay period. These increases represent a 39 to 69 percent increase for full-time employees and a 43-51% increase for part-time employees. On average, full-time employees earned approximately \$1,170 per pay period, up from about \$776 on average. Part-time employees earned approximately \$840 on average, which was up from approximately \$570 per pay period. These are undoubtedly very significant increases on average, which demonstrates the considerable impact the grant had on increasing wages.

Table 1.4 Summary Statistics for Monthly Wages

	Mean	SD	Median	Min	Max
<b>FT (n = 8)</b>					
<b>New Wages</b>	\$2,537.76	\$565.87	\$2,416.08	\$1,287.76	\$4,476.18
<b>Old Wages</b>	\$1,681.83	\$384.40	\$1,597.08	\$901.43	\$2,996.64
<b>Difference</b>	\$855.93	\$212.32	\$813.16	\$386.33	\$1,529.33
<b>% Change</b>	51%	9%	48%	41%	69%
<b>PT (n = 3)</b>					
<b>New Wages</b>	\$1,819.35	\$375.08	\$1,790.70	\$1,103.35	\$3,016.13
<b>Old Wages</b>	\$1,234.16	\$263.03	\$1,205.45	\$733.90	\$2,123.36
<b>Difference</b>	\$562.64	\$143.78	\$4557.38	\$258.15	\$903.35
<b>% Change</b>	48%	3%	50%	42%	50%

Table 1.4 shows full-time employees earned an average of about \$855 more per month, while part-time employees earned an average of approximately \$562 more per month. Their average monthly earnings increased from \$1,681 to \$2,537 for full-time employees and \$1,234 to \$1,819 for part-time employees.

Similarly, Table 1.5 below shows full-time employees earned an average of approximately \$30,000 in 2022, which is up from approximately \$20,000 in 2021. On average, full-time employees have earned \$10,000 more in 2022. Part-time employees have earned an average of approximately \$22,000 in 2022, compared to approximately \$18,000 before the increase. Due to the wage increase, part-time employees have earned approximately \$7,000 more.

Table 1.5 2022 annual wages

	Mean	SD	Median	Min	Max
<b>FT (n = 8)</b>					
<b>New Wages</b>	\$30,453.15	\$3,918.60	\$29,033.96	\$25,784.13	\$37,639.02
<b>Old Wages</b>	\$20,181.96	\$2,771.41	\$19,521.62	\$16,316.54	\$25,092.36
<b>Difference</b>	\$10,271.19	\$1,785.09	\$9,913.29	\$7,727.37	\$12,805.74
<b>% Change</b>	51%	9%	48%	42%	68%
<b>PT (n = 3)</b>					
<b>New Wages</b>	\$21,832.19	\$1,569.13	\$22,476.33	\$20,043.50	\$22,976.75
<b>Old Wages</b>	\$17,809.88	\$1,264.70	\$15,324.50	\$13,369	\$15,736.15
<b>Difference</b>	\$7,022.31	\$546.53	\$6,740.18	\$6,674.50	\$7,652.25
<b>% Change</b>	48%	4%	50%	43%	50%

Table 1.6 Average hours per pay period

	Mean	SD	Median	Min	Max
<b>FT (n = 8)</b>					
<b>Regular</b>	72.15	9.87	73.82	24.22	80
<b>OT</b>	2.15	2.10	1.55	0.05	11.98
<b>PT (n = 3)</b>	55.24	8.53	55.45	20.87	78.32

Table 1.6 shows the average hours worked per pay period. We found that on average, teachers worked less than 80 hours per pay period, which corroborates some of the qualitative data’s findings that COVID-19 disrupted attendance and that some teachers felt the wage increase provided some financial stability that allowed them to take time off for personal reasons.

## Conclusions

- Wages have significantly increased for all employees during the pilot period.
- The pay gap between the minimum and maximum paid employees was \$2 or less, which may be a relative indicator of pay equity for both full and part-time employees.
- The 2022 annual wages for full-time employees represents a substantial increase. That is, as a result of the wage increase pilot program, the center was able to raise wages towards the higher end of the national median (McClellan et al., 2020).
- On average, we find that teachers worked less than 40 hours per week, although the qualitative data suggests this is due to the increased financial confidence and flexibility employees expressed during the pilot year which allowed them to take needed time off.

## Part 2: Reported Material and Mental Well-Being and the Effect on the Center

Through a series of individual and group interviews performed throughout the year of study, the participants reported an improvement in their mental well-being due to the wage increase. This well-being was reported first and foremost as a reduction in overall stress. Second, participants reported a sense of satisfaction since they could afford to provide additional support for their loved ones. In addition, a few reported an increased sense of confidence. Importantly, the participants indicated this improvement in their well-being made them more effective at their work. They also indicated they believe a wage increase policy would benefit other centers. Below we will first provide a description of the setting and of each of the women who engaged in the in-depth interviews over the course of the year (pseudonyms provided). Then we will report their observations of the wage increase through their words.

### Setting and Profiles

The center is in a large city in the Southwestern United States. The city is known for its high levels of inequality and the poverty of working people. The center is located on Eastern side of town far removed from the wealthier neighborhoods on the North Side.

The building is between a large neighborhood of small, two and three-bedroom ranch homes and an interstate highway. Along the highway, its neighbors include warehouses and thrift stores. It is a long tan building with red doors. The building had originally been built and used as a motel. The classrooms are cheerful, with student art on all the walls and different activity stations spread about the rooms. The center is clean and welcoming. Often a train passes nearby. The sound from the train is so loud it can be difficult to hear what is being said in the center. Behind the building outside, the center has a large fenced in play area with equipment where the children laugh and play.

The center employs 14 to 18 educators at any given time. This translates into 7 to 9 classrooms ages 0-5 and an afterschool program.

### *Leilani*

Leilani is a tenacious woman who identifies as South Asian American. She is the owner and director of the center. She has a college degree in chemistry. Her husband and three children often come to the center to work with her and improve the facility. Leilani is goal driven and wants to be the best possible business owner who is known for developing her staff. In recent years she has engaged in an effort to have the center designated with the state rating of Texas Rising Star by lowering class sizes and offering training and coaching to the educators in terms of curriculum and pedagogy. Leilani sees this effort as connected to equity and believes the children on this side of town deserve the same quality of education as more affluent areas.

### *Daisy*

Daisy identifies as Latina and is known to her friends and family as someone who likes to be helpful. She is a mother and enjoys baking. She has worked at the center for 12 years as a teacher and more recently assistant director. She came to early childhood education because she liked taking care of her son and his cousins when they were little. She eventually translated that talent into a career as an educator. Daisy worked closely with Leilani to strive for the Texas Rising Star designation.

### *Victoria*

Victoria is an early childhood educator who identifies as Latina. Her friends know her as easy going, funny and observant. She has an adventurous side but says that she tempers it with a keen sense of caution. Earlier in her life Victoria spent many years as a waitress. However, she decided that she wanted something new and applied at the center six years ago. Since then, she has been an educator who continues to improve her craft and enjoys working with the children.

### *Julia*

Julia is a newer educator who identifies as Latina. Many people see her as extremely quiet and are somewhat surprised when they learn she works with two-year-olds. Although she is the youngest of four girls in her family, Julia is a leader amongst her sisters. She was first to get her license to drive and to start working. She is also a devoted aunt to her three-year-old niece and



her six-year-old nephew who has autism. She earned some college credits but has not returned due to a lack of funding. Julia prides herself on her work with children and enjoys a sense of satisfaction when students move on to the three-year-old classroom with a much greater ability to communicate than when they started with her.

### *Mary Ann*

Mary Ann is a mother of two and is expecting a third. She identifies as Latina. Mary Ann has worked at the center for two- and one-half years and prior to that she was a stay-at-home mom. Her friends would describe her as spontaneous and funny. She loves working with the younger two-year-olds and appreciates seeing their imaginations develop as they learn. She finds being an educator extremely rewarding.

## Reported Observations of the Wage Increase

### *Stress*

Every participant described a reduction of stress in their lives following the wage increase. According to participants, these reductions in stress occurred at the school and at home. Researcher observation seemed to confirm these reports.

Daisy concluded in her interview in March, “Well, I’m feeling less stressed.” She explained that the wage increase led to the ability to plan ahead when she said,

*I'm not, maybe, as stressed, I would say. I was so worried about, okay, next week. And it's like, okay, I'm already separating for what's going to come in the next two weeks, and now I know that I can still have a little bit and I don't have to worry.*

When the researchers followed up with her in August regarding the sense of stress she reported, “Yeah. I see some people are less stressed in general.” referring to her co-workers. “And I still catch myself and I’m like, ‘Oh, it’s okay. Everything’s fine. Yeah.’” During a focus group interview in August, Daisy also noted that it did not happen all at once, “I want to say, for me, I felt around March, I was able to see that I’m less stressed.”

Daisy's experience was echoed by others. Mary Ann noted, "Me and my family are able to, now, without stress, being able to pay our bills mainly." Julia explained that she was feeling different this year. She stated,

*Because of the way I was living last year, very struggling with money, financially, and then having to move back home with everything and then getting a new car. So, it's, okay, this is getting easier to just let it go slowly and just leave that stress. [...] I'm not stressed out because getting a whole new vehicle, you have the car payments, and then you have the insurance of being full coverage and it's like, ooh. So, I don't have to save a full paycheck just to pay off the month.*

By December the participants were able to take stock of the year and explain exactly why their stress levels had been reduced. Victoria explained her personal life had improved a great deal because she was able to remove herself from an emotionally abusive relationship due to the wage increase. She explained, "I've always been a survivor. I've always found a way to make it. So, I think that was his way of trying to [hold me back], because he knew that I was a survivor. So yeah, that little increase made it so much better for me to be able to get out of the relationship."

Julia reflected on the year and explained she had been able to let go of past trauma. She told us that, "Well, in a way, it kind of helped mentally too ... because I did seek therapy for a little bit, because last year was a mess. So, this year is just ... I'm a lot, I guess, more able to be where I'm supposed to be and not in the past."

In December Mary Ann reiterated, "Bills were a big stress factor. And now, they're still there, obviously, but it's not as bad as it was in the beginning."

The director also confirmed all of her teachers are less stressed when she stated, "I think my teachers are financially eased. I haven't had anyone ask me for an advance or anything like that." Victoria explained her observations of her co-teacher (not interviewed) and said,

*I guess, a little bit of stress things, and I've seen that the stuff that she's been telling me money-wise has now changed, that she's able to make certain things, or she's able to accommodate her life. And then you can see that it's just gotten better for her as well. Mm-hmm (affirmative). And I guess that's helped with her mood.*

### *Satisfaction and Relief*

In addition to a reduction in stress, participants reported a sense of satisfaction and relief at being able to provide more for their loved ones. For example, Victoria, explained, “I've seen that I'm able to pick better foods for my kids, now that I have that little bit of wage increase.” Julia described how she was able to save up money so she could move in with her recently divorced sister and her kids. Importantly, she stated, “So me and her have gotten a lot closer since then because I'm there with the kids all the time.” She was happy that she could do more for her autistic nephew. For example, she remarked, “It helps out a lot. And I'm more helpful towards my sister and her kids because she's a stay-at-home mom. And so, we took the kids to the museum last weekend, and they had a blast. That's really amazing.” Over the summer she was also able to get the kids season passes to an amusement park. She seemed happy she could provide the childhood experiences she had once had. She even hoped next year she might be able to take them on a plane to California if she saved up. In December she shared she felt like she could also provide better food for her niece and nephew. In addition, she was able to support her sister as she finished her college degree.

Victoria also described being able to better support her kids and the feelings it gave her, “I've seen it a lot because I've seen that my daughter, now, she asks me for certain treats and stuff. And it makes me happy that I'm able to give that to her now. And it has helped.” Then she laughed, “And it's funny because now, my son, he eats a lot. So, now he expects it, now. So, I'm like, ‘Okay, now I can keep up with you!’.”

In December, Victoria reflected on all of the things she had accomplished, such as starting a side business and engaging in charitable giving.

*Yeah, At least I've been able to fix my car whenever it broke down, I was able to buy necessities, whatever I needed in the home. I was able to try to expand my house, fix things around the house too. So stuff like that. And then I was able to buy things for the business that I'm doing. So I'm able to do that. So by my way of doing that now, whatever I don't sell, I have a friend that will take things to Mexico, so I give back.*

Daisy in January described how she was not satisfied with her apartment at the time. In March she explained, “We are going to be looking into getting a home.” In August she explained,

*Well, I did move. I haven't moved into a home yet, but we did move into another area of town. It's not too far, but it's so much better. It just feels safer. It was kind of rough where I was at, so I've done that big time change and my son's helping me out of course. That's a big change that's happened with me.*

She explained she had been able to file the right paperwork and was in the process of looking in an area Northeast of the school. She explained, “Like I mentioned before, we did try it last year but unfortunately we hadn't qualified quite yet.” Now she was satisfied she was going to qualify. When researchers followed up in December she explained,

*Yeah, we're doing really good. So yeah, I'm really happy I took that step. Yeah, it's a lot quieter. It's nice. We have a good space. It's not humongous, but we have the washer and dryer, so we don't have to go out to do a wash. It's just a little more spacious and like I said, it's just more quiet, more you feel just a little more safer and stuff there.*

Daisy also relayed she had been able to take part in the wedding planning for a friend due to the wage increase. She felt satisfaction as she told us, “Just getting things together for her, throwing her bridal shower, I know I wouldn't have been able to do all those things.”

Mary Ann also described the improvements in her life and in August said, “I was able to buy my kids better foods.” Importantly, in December we learned Mary Ann's daughter had to have surgery. She explained,

*And then my daughter had surgery, so I had to be out for about a week. So, that helped a lot, too. Even the days that I did come and subtracting the days that I didn't, it was still a good enough amount, for me to make certain ends meet and stuff. So, it was a big help.*

When the director was asked if she had seen any changes in the lives of her teachers she responded,

*I think those are the two biggest observations I've made as far as... I will say that I notice a lot of the teachers have moved to a better apartment. A few of my teachers have made the move in their housing or one or two have purchased cars. So that's been a benefit for them.*

#### *Work-related effects*

The results of this shift in mental and material well-being are seen in the work of the teachers. Daisy's statement captures what many reported when she said, "I'm more focused on what I need to do because I'm not worried about the household and stuff like that." Importantly, Victoria reported a key improvement in her work when she said,

*Instead of worrying about other things, maybe some household problems or something we're able to be in tune with our kids, able to not show them that we're stressing ourselves, I guess not letting them feed off of our energy and our stress and stuff.*

Later, Julia also noted that the kids benefit from the relief of teacher stress when she explained,

*I have more patience with them too and I'm able to... they feel that I'm not... how do you say it? My energy is not tense because they can feel it. If you're coming in feeling you got something going on at home and you're coming... so they're clingier now too, but yeah, they would feel it. They certainly do feel it.*

She summed up by saying, “I am now, I guess, more motivated to try to get to work and to come into work.” Mary Ann explained,

*It has encouraged some of the other teachers to try different things, maybe things that they weren't willing to do. There are extra things that come with Rising Star and with getting paid very little sometimes it's like well, no, it's not worth it. But getting that better pay is like “I can do this; I get paid enough to do this.”*

Daisy described her conversations with other teachers when she said, “They were really excited to see, like, a full [check], without missing anything or anything like that, so that's what... Yeah, they were like, “Okay, I want to get all my 80 hours.”” She herself agreed with this sentiment and said,

*I like when I get my check and I see! So, it makes me not miss work. Yeah, I do. I don't like, to even like, even an hour or two. The other day I had to miss, I had to leave on an emergency for two hours and I was like “Oh my God, that's going to be less on my check.” Even though it's only two hours, I want to see the whole thing.*

Daisy has seen this among the other teachers also. She noted many of them are working to get their credentials and she is willing to help,

*I was like, I'll help you. And I tell all the girls that are doing the CDA, I'll help you. I've done the CDA, so I know the portfolio kind of thing. And we'll just, when we are ready, we can sit down and do it. So yeah, they're open to change and doing the work that comes with the job and the Rising Star and stuff like that. So yeah, I've definitely seen a change with that!*

When Daisy was asked if it motivated her, she reframed motivation into a discussion of confidence. She said,

*I think it gave me a little bit more confidence. I think that's why I stalled for a while. I didn't have that confidence to like, "Oh, I'm not going to be able to do it. I won't be able to do it," so it gave me that and that's what really pushed me and I was like, "Let's just do it. We can do it." So we did it and we're doing good.*

Victoria also mentioned that the other teachers are feeling the effects. She said, "They do come in and they're more cheery. They want to be here and more involved with the kids." As for herself she explained, "And I come in a better mood. Because I do get up at four o'clock in the morning to come here by 5:45. So it's more motivating. Okay. I get to go to work, work with the kids and be more with them." Profoundly, she went on to describe it as a process of learning and growing when she said, "Me, I am learning from the kids. Then I'm learning to show other teachers and then they learn. Like I said, everybody's going to grow from it."

Other participants reported the wage increase allowed them to take some mental health days they could not afford before. Indeed, Leilani mentioned,

*I think some people have the mindset, "Okay. I just need X amount of dollars to make rent and my other financial obligations, anything else is icing on the cake. And if I want to take a day off, then I can afford to take a day off."*

In addition to describing an improvement in stress levels, confidence and material conditions, participants explained the quality of their work experiences had improved. For example, as mentioned above, many of the teachers have been encouraged to get a child development certification. They explain that engagement with the courses has improved their work. Mary Ann pointed out,

*Even the courses that I am doing from our CDA program, even then, I'm seeing little things where I'm like, "Oh I can do that in my class now." Or certain things where I'm like, "Oh I can use that or certain example" and [the instructor] uses that example. I'm like, "Oh that's perfect, I could use that next time." I feel that's helped a lot as well.*



Julia extended this idea when she described her attempts at implementing the newer curriculum.

*I feel for myself that it's rewarding, seeing them finally either pick up what we're trying to show them even if it's a word or something, I feel it's rewarding. It makes me feel great that I'm doing my job knowing and seeing that they're understanding and they're getting it and stuff like that.*

Daisy noted the wage increases and the new curriculum allowed her to focus on the needs of the students.

*Not having that stress also lets you think much better. Before you would have all that going on in your head and you're like, "Okay, that's it," but with [the new curriculum], you're able to more mentally think about...you're free to think about what you need to do.*

Mary Ann described how her work with an instructional coach has improved. After the coach observed a classroom, she sat down with the teachers to discuss her observations. Mary Ann explained,

*Now that she's observing us and she's giving us the certain feedback that we need, I myself feel that it's less stressful and I'm actually taking in what she's telling me, and I feel every single time it's more and more less stressful now.*

The wage increase has also seemed to coincide with a greater sense of teamwork at the school. As Victoria explained,

*And even if one of us or someone does get sick, it's not as stressful because I want to say she's hired some more people. So, I guess it's just not as stressful on us, now that we have more help to be able to come in, substitute for another teacher, or something.*



Mary Ann extended this sense of teamwork into the co-teacher relationships saying,

*That's really important, recognizing and having that bond with your teacher. They don't need to be best friends and hang out after work. They just have that connection here at work to recognize, "Oh, I need to do this while she's doing that." One teacher continues a lesson while the other one is assisting, giving empathy to the child that is upset or needs some extra attention.*

Julia also described how the wage increase improved her relationship with her co-teacher. She explained,

*Yes. Before she would have issues with paying for things and so she wouldn't come in because she had to handle some stuff. And so now she tends to show up more so I'm not by myself all the time. So, it's good. I think that's what brought us closer and made it easy for us to communicate because if she's going to be out, she'll tell me. And I'm like, "okay." So, I'm prepared, so I can know, and mentally prepare myself on how to talk to the kids better or be calmer because I'm looking forward to being alone. And I'll do the same if I'm out. I'll tell her. So, we tend to just make it work that way.*

In December it appeared this relationship had grown stronger. Julia explained this allowed them to be more present. She said, "She knows about my family and how everything works there, and I know her family. So, when we come together, we just talk and sometimes we don't even talk, we just look at each other and we're like, 'Okay, we're on it.' We're just, like, there." She went on to connect this presence to the teaching and caring for the children, "I guess it's, and everybody's kind of more relaxed because they don't have to worry about bringing their personal life into here, just worried about, 'Okay, just got to do what we're here for, teach the kids, teach them how to be humans'".

The participants also attributed better interactions with kids to the wage increase. Victoria told the researchers, "We have better lessons because now we're able to bring in better surprises... Even if it's us, the teachers, buying more supplies, better materials, I guess for the kids, more for

them.” She explained specifically they brought in fidget spinners and a toy jellyfish tank for the calming area. The students really appreciated the new aspects of the classroom. Julia explained, “And [the students] are like, ‘Oh, hi, jellyfish.’ So, now they ask me, ‘Can we play with the jellyfish?’ They’re funny!” Julia also explained, “It helped with bringing in more things that the kids needed. Getting our classroom better organized and set up for the Texas Rising Star things, like our classrooms has come a long way.”

The director also noted improvements across the school. Describing the higher educational standards required for the state certification, Leilani stated,

*I don't feel bad saying, "Hey, you need to do this," and somebody possibly thinking, "Well, you don't pay me well enough for me to do that." But I don't feel like that is an obstacle for me to overcome at any point now. And I do feel like the teachers are willing to. Before I've had people grumble or whatever, if I ask them to do something. But I think that, I think they feel well compensated for what I'm asking of them.*

In addition to the increased motivation to implement the new curriculum the director noticed hiring and retaining teachers is easier. Referring to the higher wages she noted, “So I’m able to offer something, and they actually come and stay to work instead of accepting the job. Before I would have people accept the job and then just not even show up on the first day.” The wage increase has also led to greater retention of teachers. Leilani explained,

*I've only had one teacher leave and she was actually one of the teachers that was paid the most, but she just decided childcare was just not for her. And that her mental well-being was far exceeding what she was making. So, but other than that, nobody really has wanted to leave or expressed wanting to. Nobody has left.*

Leilani followed up that even if she did lose a teacher, she could replace them. She noted, “If you leave, I have the ability to actually find someone to come and replace you.” In December she noted the impact over the year by saying,

*It's a big difference. And that is really reflected on the children, because the children see the same faces and it's not like a different face every three months. And then that teacher has to learn how to deal with Lamar and by the time she learns that she gets a better paying job and leaves and we're starting all over again. So yeah, it made a big difference.*

Some of this improvement is also attributed to the director's ability to expand as more people begin to learn about the reputation of the school. In the previous year she almost had to close the nursery classroom because she could not hire the staff. However, now she notes, "I find that I can have staff, I can expand the slots that we have. So, our nursery, let's say zero to 18 months, has the longest wait list ever." In addition, she noted she has seen growth at every level, "We have almost, all of them are full at this point. Just two or three spots in the whole school are available."

#### *Recommendations to Other Centers*

In December we asked the participants if they would recommend such a wage increase policy to other centers and why. They all answered in the affirmative. Mary Ann reasoned, "If the teachers are doing something good, I think it would help them feel better, as well as feel more rewarded, aside from the way they probably already feel, seeing their kids flourish and stuff." Daisy pointed to turnover when she explained,

*Well, I think the wage increase for any preschool teacher or daycare teacher, or early learning teacher would be really good because there is a lot of people that really love to work with children, but then they're like, "You know what, I just can't do it." So, then they leave. And you lose that really good teacher that really loves to work with children. They just can't afford to make that income.*

Powerfully, Victoria offered a very thoughtful response when she told us, "Well, it should be all around this city because we're all in this world together. So, it's going to affect each other no matter however you look at it, because we're all into this. We're all in communities."

Leilani explained that for other directors to believe it will make a difference, they have to experience it. She knows this from her own experience of the project,

*I know that other directors have to experience it to see the value of paying that. Because I also, I will say, let's say December of last year, I thought it was a great idea, but I thought, "Okay, we'll do it. It's great and we will go back, and we'll just go back to what we were doing." But now I see we did it and I don't want to go back to what we were doing. So, I think the daycare directors really have to experience it or be given the chance to see that it will work, or it does make a difference.*

## Conclusions

- Overwhelmingly participants noted their stress levels reduced.
- The participants described moments where the wage increase gave the feelings of satisfaction and happiness as they were able to provide for their loved ones.
- These changes led to a greater sense of confidence and motivation among teachers as they raised standards and implemented new pedagogy and curriculum.
- Coincidentally, teachers reported a greater sense of teamwork among their co-teachers in these new efforts.
- The director explained her ability to engage in instructional leadership and to hire and retain teachers had improved.
- The participants attributed improvements across their work-life experiences to the wage increase.
- Other centers need to experience a wage increase policy to see the benefits.

## Part 3: Well-being Survey Analysis

The following three tables represent the results of the well-being survey administered in January, July and December 2022. Table 3.1 demonstrates the distribution of responses for the first seven questions of the survey, which asked respondents to indicate the frequency or answer yes/no to questions about finances. Table 3.2 summarizes the responses for how respondents would handle an unexpected emergency expense of \$400. Table 3.3 summarizes the responses for items related to job satisfaction and commitment.

Table 3.1

		January (n = 15)			July (n = 20)			December (n = 14)			ANOVA	
		n	%	Miss.	n	%	Miss.	n	%	Miss.	F	p
<b>Q1</b>				0			0			0	5.957	.005**
	<b>Often</b>	8	53.3		8	40		3	21.4			
	<b>Sometimes</b>	6	40		10	50		2	14.3			
	<b>Rarely</b>	1	6.7		1	5		8	57.1			
	<b>Never</b>	-	-		1	5		1	7.1			
<b>Q2</b>				0			0			0	5.663	.006**
	<b>Often</b>	7	46.7		6	30		2	14.3			
	<b>Sometimes</b>	5	33.3		8	40		3	21.4			
	<b>Rarely</b>	3	20		5	25		4	28.6			
	<b>Never</b>	-	-		1	5		5	35.7			
<b>Q3</b>				0			0			0	.652	.526
	<b>Yes</b>	11	73.9		11	55		8	57.1			
	<b>No</b>	4	26.7		9	45		6	42.9			
<b>Q4</b>				1			0			0	.604	.551
	<b>Yes</b>	4	28.6		3	15		2	14.3			
	<b>No</b>	10	71.4		17	85		12	85.7			
<b>Q5</b>				1			0			0	3.188	.051
	<b>Yes</b>	8	57.1		6	30		2	14.3			
	<b>No</b>	6	42.9		14	70		12	85.7			
<b>Q6</b>				0			0			0	1.650	.203
	<b>Often</b>	4	26.7		1	5		2	14.3			
	<b>Sometimes</b>	4	26.7		5	25		3	21.4			
	<b>Never</b>	7	46.7		14	70		9	64.3			
<b>Q7</b>				0			0			0	1.158	.323
	<b>Often</b>	3	15.8		1	5		2	14.3			
	<b>Sometimes</b>	6	31.6		7	35		3	21.4			
	<b>Never</b>	6	31.6		12	60		9	64.3			

\*p<.05, \*\*p<.01, \*\*\*p<.001

Q1 – In the last year, how often did you worry about money?

Q2 – In the last year, how often did you run out of money between paychecks or before the end of the month?

Q3 – Was there a time in the last year when you or anyone else in your household needed to see a doctor, dentist, or go to the hospital but couldn't go because of the cost?

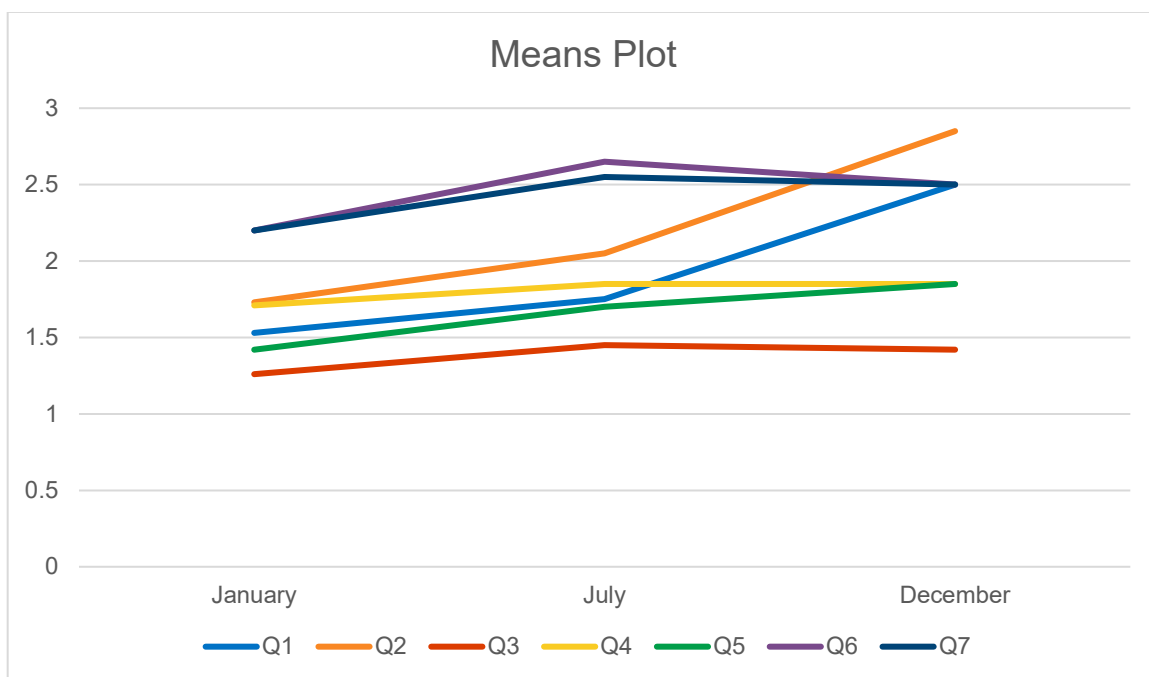
Q4 – In the last year, did you not pay the full amount of rent or mortgage because there wasn't enough money?

Q5 – In the last year, did you not pay the full amount of your phone, gas, oil, or electricity bill because there wasn't enough money?

Q6 – In the last year, reliable transportation is something I worried about.

Q7 – In the last year, how often were you worried whether food would run out before you had money to buy more?

Table 3.1 shows some very interesting changes in responses to questions about finances. First, in January and July, a majority (90%) of respondents reported they often or sometimes worry about money. By December, however, only 35% of respondents reported they often or sometimes worry about money. We see a similar trend for question two, which asked respondents how often they ran out of money between paychecks. For example, 80% of respondents reported they often or sometimes ran out of money in the previous year, which dropped down to 70% in July and 35.7% in December. An analysis of variance (ANOVA) for these first two financial well-being questions yielded a statistically significant result at the  $p < .05$  level. As our Hockberg's GT2 post-hoc test revealed, and the means plot below demonstrates, this statistical significance is due to the dramatic increase from January to December of respondents reporting they rarely or never worried about or ran out of money in the last year. This leads us to conclude the wage increase had a significant, substantive and dramatic effect on teachers' overall confidence about money and a reduced likelihood they would run out of money after 12 consecutive months of receiving the increase. It corroborates the qualitative findings.





Although not statistically significant, in question 5, we saw a small increase in the number of participants who indicated they did not forego paying the full amount in utilities. We can conclude this is likely due to their increased confidence about money and reduced likelihood they would run out of money.

We saw consistent responses for questions 3, 4, 6 and 7 across all three administrations of the well-being survey. However, fewer respondents in July and December indicated they did have to forego healthcare in the last year. Additionally, fewer respondents in July and December indicated they had to forego paying the full amount of rent or mortgage. Similarly, much fewer respondents often worried about reliable transportation in July and December as compared to January. Lastly, much fewer respondents often worried about running out of food in July and December as compared to January. Although there was no statistically significant paired samples t-test result comparing these items from January to July, as well as no statistically significant ANOVA result comparing these items from January to December, the descriptive trends do suggest that the wage increase resulted in a slight improvement in respondents' ability to pay for healthcare, housing, transportation and food that was sustained throughout the year.

*Table 3.2 Emergency expense response*

	Jan. (n = 15)	July (n = 20)	Dec. (n = 14)
<b>a. Put it on credit card and pay off in full</b>	3	4	3
<b>b. Put it on credit card and pay off over time</b>	4	3	4
<b>c. With the money currently in my account</b>	7	5	5
<b>d. Using money from a bank loan or LOC</b>	0	1	0
<b>e. By borrowing from a friend or family</b>	7	9	0
<b>f. Using a payday loan, advance, overdraft</b>	3	1	2
<b>g. Selling something</b>	4	2	1
<b>h. I wouldn't be able to pay for the expense</b>	3	2	3
<b>i. Other</b>	0	2	0

Table 3.2 summarizes the responses to a survey question which asked participants to indicate all applicable responses to an unexpected \$400 emergency expense. We see consistent

responses across the three months for using a credit card. We also see fewer participants would use money in their account in July and December than in January. This could be an indication inflation is eating up any savings participants may have. Using a bank loan or line of credit remains an unpopular response to an emergency expense across all three administrations of the survey. However, we see a dramatic drop to zero responses that teachers would borrow from a friend or family by the end of the year. This may be a result of the decrease in teachers who worried about money discussed above; as participants feel more confident about their finances, they may be less likely to lean on friends or family because they feel they have more control. Similarly, fewer respondents indicated they would sell something from January to July. Albeit less popular, there was a consistent number of responses indicating they would use a payday loan, advance or overdraft or they would not be able to pay for the expense altogether. Overall, it is difficult to tell from these responses if the wage increase has improved participants' financial position as it relates to covering unexpected expenses, which could be due to the general trend that compensation for ECE teachers is barely a living wage (Whitebook et al., 2014).

*Table 3.3*

	Jan. (n = 15)			July (n = 20)			Dec. (n = 14)			ANOVA	
	M	Sd	Med.	M	Sd	Med.	M	Sd	Med.	F	p
<b>Satisfied</b>	3.53	.915	4	3.45	.825	4	3.85	.363	4	1.254	.295
<b>Leave</b>	2.53	1.06	3	2.5	1.10	3	2.07	1.14	2	.814	.449
<b>Enthusiasm</b>	2	1.06	2	2.05	1.14	2	1.42	.851	1	1.653	.203

*\*p<.05, \*\*p<.01, \*\*\*p<.001*

Satisfied - I am generally satisfied with being a teacher at this school.

Leave - If I could get a higher paying job, I'd leave teaching as soon as possible.

Enthusiasm - I don't seem to have as much enthusiasm now as I did when I began teaching.

Table 3.3 summarizes the results of the questions that asked respondents how satisfied they are with being at the school, if they would leave for a higher paying job and whether their enthusiasm has declined. Respondents had to indicate how well they agree with the statements under the table above on a scale of 1 to 4 where 1 indicates they strongly disagree and 4 indicates they strongly agree.

We can see respondents were overall very satisfied across the year, with the median answer of 4, or strongly agree. Interestingly, the standard deviation for this item declined in each administration of the survey which indicates that as the wage increase went on, more and more participants were in agreement they were satisfied. Although the median of 3, or somewhat agree, indicates many participants would leave teaching for a higher paying job, the median declined to 2 by December. The majority of respondents in January and July indicated they somewhat disagree they are less enthusiastic now than when they began, and by December the most common answer was strongly disagree. Although ANOVA results comparing the means across the three administrations of the survey did not yield statistically significant results, these descriptive findings do suggest teachers are more satisfied, less likely to leave and have more enthusiasm by the end of the first year of the wage increase.

## Conclusions

- Statistically significant differences in financial well-being survey responses reveal a significant, substantive and dramatic positive change on teacher's overall confidence about money, as well as a reduced likelihood they would run out of money after 12 consecutive months of receiving the increase.
- The results from the financial well-being survey also suggest the financial position for participants in the pilot has improved from January to December, particularly as it relates to financial security around paying for utilities, reliable transportation and food.
- It is likely the overall improvement of participants' financial well-being, as it relates to paying for something unexpected, is hindered by the relatively low wages they earn to begin with.
- Generally, the participants are satisfied and remain enthusiastic about their jobs. The slight improvement in satisfaction and enthusiasm and lower likelihood they would leave for a better paying job may be due to a stabilizing cohort of teachers as the year went on.

## Part 4: Analysis of Class Assessment Means

There are a number of limitations to the CLASS assessment data that impact our analysis. Firstly, there are three separate CLASS assessment observation forms, which represent three different age grouped classrooms. This means that we can only make comparison across the same types of observation sheets, and even if we were to combine like measures across the various observation sheets, we would further reduce our sample size. Secondly, there are very few observations for each month, with a minimum of 0 and maximum of 3. Moreover, some observation sheets do not include scores for some or all measures. In order to make meaningful comparisons across months through analysis of variance (ANOVA) statistics, we would need to have larger sample sizes and complete data. For example, even when ANOVA statistics were statistically significant, we were unable to complete the necessary post-hoc tests to determine where the majority of the variance across months lay, because many months only had one observation. We did our best to analyze the descriptive statistics. The scores dipped and peaked and were ultimately flat from January to December, which does not demonstrate much change over time or impact of the wage increase on CLASS assessment data. Lastly, there are multiple teachers listed on each observation form, and each teacher is evaluated across multiple observation sheets. This limits our ability to track individual teacher scores and analyze the trends for each teacher across the months of the pilot program.

Despite these limitations, we are able to analyze the means of each indicator across all months in order to look for trends. Table 4.1 below shows the monthly means for each indicator in the classrooms that were observed on ten measures, Table 4.2 shows the monthly means for each indicator in the classrooms observed for eight measures and Table 4.3 shows the monthly means for each indicator in classrooms observed for four measures. After each table, we present a line graph depicting the means over the course of the year.

Table 4.1 CLASS assessment monthly means for 10 indicator observation sheets (n = 23)

Month	PC	NC	TS	RSP	BM	PD	ILF	CD	QF	LM
Jan. (n = 2)	6	1	6	5.5	6	5.5	4.5	3	2.5	3
Feb. (n = 2†)	6	1	6	6	5	5	3	2	2	1
Mar. (n = 3†)	1.66	1	1	1	1	1.33	1.5	1	1	1
April (n = 2)	4.5	1.5	4	4.5	3.5	2.5	2.5	1.5	1	1
May (n = 2†)	5.5	1	4.5	4.5	4	5	4	2.5	3	2.5
June (n = 2)	5.5	1	5	5	4	3.5	3.5	2	2.5	2.5
July (n = 3)	5.66	1	5	5	4	4.66	4	2	2.33	2.33
Aug. (n = 2†)	5	1.5	3	4.5	4	5	4.5	3	3	3
Sept. (n = 1)	7	1	6	6	5	5	4	3	3	3
Oct. (n = 2)	6.5	1	6	5	5.5	5	5	3.5	3	3.5
Nov. (n = 1)	6	1	5	5	3	2	2	2	3	3
Dec. (n = 1†)	6	1	5	†	5	5	5	3	3	3
<b>Total Avg.</b>	5.13	1.08	4.57	4.6	4.1	3.95	3.65	2.27	2.31	2.31
<b>Std. Dev.</b>	1.67	0.28	1.56	1.35	1.37	1.53	1.26	0.82	0.83	0.94
<b>Median</b>	6	1	5	5	4	5	4	2	3	3
<b>F</b>	4.79	.826	8.11	14.76	25.30	12.74	2.69	7.79	7.14	6.96
<b>p</b>	.010*	.622	.002**	.000***	.000***	.000***	.085	.001**	.002**	.002**

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

†some cases include missing scores

Table 4.1 and the means plot below show the average scores on all ten indicators remained relatively consistent, with one or two significant dips or rises throughout the eight months assessed. We found statistical significance in the variance of the means across all 12 months for positive climate (PC), teacher sensitivity (TS), regard for student perspectives (RSP), behavior management (BM), productivity (PD), concept development (CD), quality of feedback (QF) and language modeling (LM), which is represented by the F statistic and  $p$  value in the table above. When conducting ANOVA, it is necessary to conduct a post-hoc test for statistically significant results to determine where the majority of the variance lies in the data. Unfortunately, however, this post-hoc test is unable to be performed when there is 1 or less observations.

Therefore, we must rely on the overall monthly means to determine why a statistically significant F statistic was computed. We can see in the monthly means plot below the data varied greatly from month to month, with some dramatic peaks and dips along the way. This leads us to conclude the statistically significant F statistics were arrived at because the means on these items varied greatly across the 12 months collected. Additionally, it is necessary to understand there is a large number of extraneous variables at play in the CLASS assessment scores. For example, teachers work in pairs that vary from month to month, they do not always teach the same age-level classroom, bias in the scores could be present, there was some turnover of teachers in the data and the same teacher is not evaluated using the same observation sheet each month. These are all likely reasons why the data varies widely from month to month and ultimately looks flat across the 12 months.

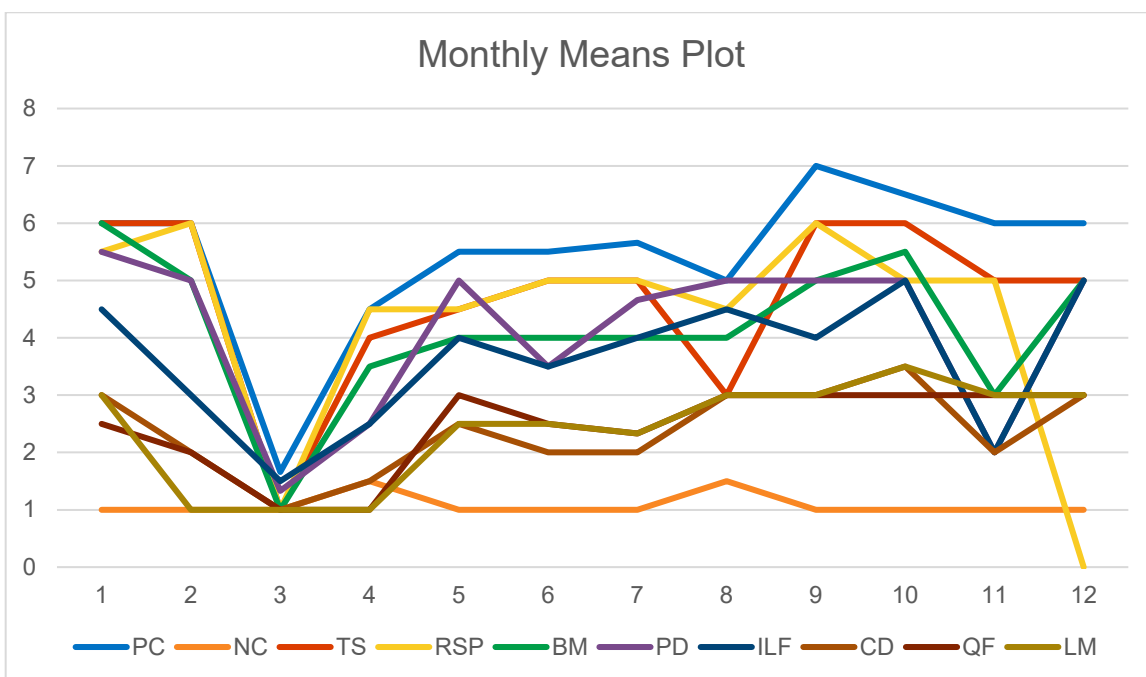


Table 4.2 and the means plot below show the average scores across all eight indicator observation sheets for the 12 months of the wage increase. As with the ten indicator observation results reported above, we see relatively consistent results across all months, with some some dips and peaks along the way. We did find a statistically significant F statistic for positive climate (PC), however, for the reasons described above, this is likely due to the variability from month to month rather than evidence the wage increase had a positive effect on CLASS assessment scores.

Table 4.2 CLASS assessment monthly means for 8 indicator observation sheets

Month	PC	NC	TS	RCP	BG	FLD	QF	LM
January (n = 3)	6	1	5.33	5.33	5.33	4	3	2
February (n = 3)	5.33	1.33	4.66	4.33	3	2.66	2	2.66
March (n = 1)	6	1	4	5	3	2	1	1
April (n = 2)	3	1	4.5	3.5	3.5	2.5	1.5	1.5
May (n = 3)	5	1.33	4.66	4.	2.66	3	2.66	2.33
June (n = 3)	5.66	1	5	4.33	3.66	2.66	2.33	2.33
July (n = 2†)	4.5	1.5	4.5	4	3.5	3.5	3	3
August (n = 3)	5	1	4.33	4.66	3.66	4.66	3	3
September (n = 3)	5.66	1	5	5	4.33	3.66	3	3
October (n = 3)	4.66	1	4.33	4.33	3.66	3	2	2.33
November (n = 3)	5.66	1	5	5	4.33	3.66	3	3
December (n = 3)	6	1	5	5	4.33	3	2.33	2.33
<b>Total Average</b>	5.25	1.09	4.74	4.58	3.87	3.32	2.48	2.48
<b>Std. Dev.</b>	.964	.300	.855	.958	1.02	.979	.769	.724
<b>Median</b>	5	1	5	5	4	3	3	3
<b>F</b>	3.18	1.08	.358	.672	1.35	1.62	1.95	1.81
<b>p</b>	.013*	.424	.958	.748	.272	.171	.097	.121

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

† some cases include missing scores

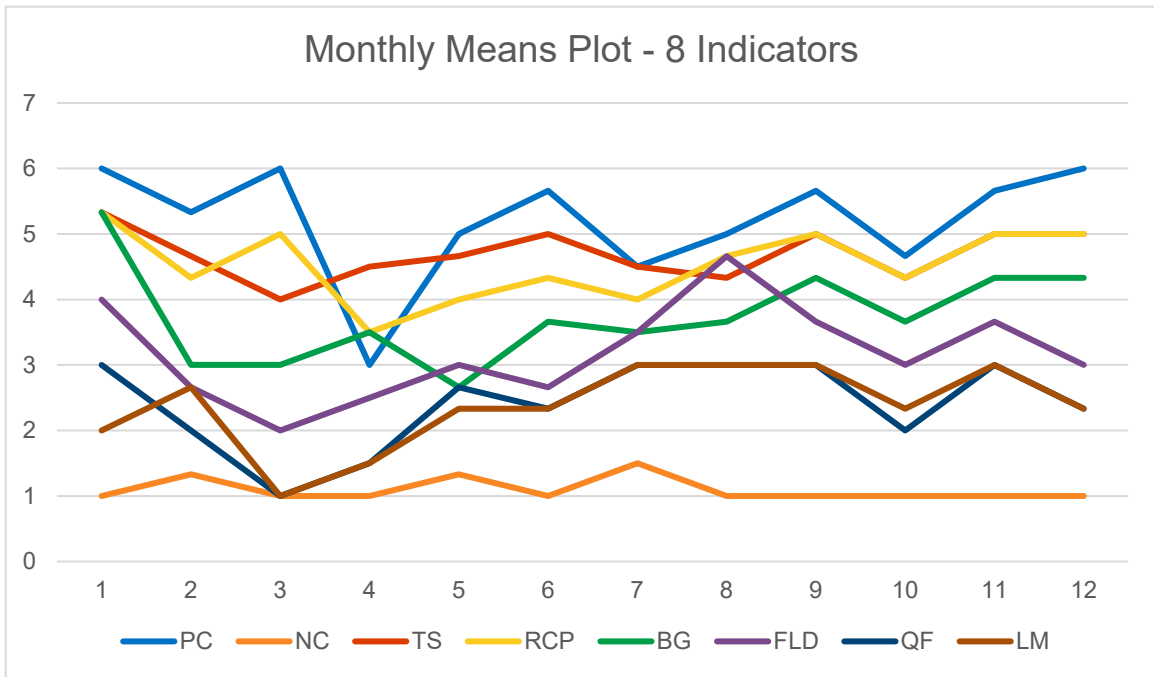




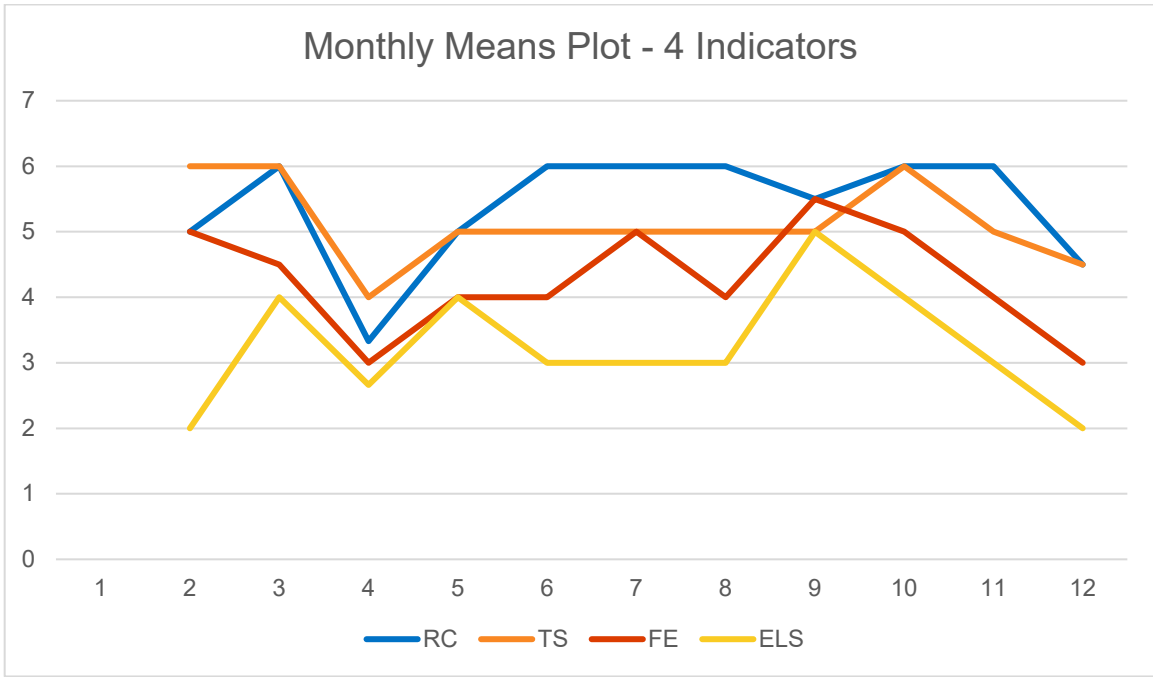
Table 4.3 CLASS assessment monthly means for 4 indicator observation sheets

Month	RC	TS	FE	ELS
January (n = 0)	-	-	-	-
February (n = 1)	5	6	5	2
March (n = 2)	6	6	4.5	4
April (n = 3†)	3.33	4	3	2.66
May (n = 1)	5	5	4	4
June (n = 1)	6	5	4	3
July (n = 1)	6	5	5	3
August (n = 1)	6	5	4	3
September (n = 2)	5.5	5	5.5	5
October (n = 1)	6	6	5	4
November (n = 1)	6	5	4	3
December (n = 2)	4.5	4.5	3	2
<b>Total Average</b>	5.12	5.06	4.12	3.25
<b>Std. Dev.</b>	1.45	1.16	1.40	1.34
<b>Median</b>	5.5	5	4	3
<b>F</b>	.726	.323	.553	.946
<b>p</b>	.688	.944	.810	.548

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

†some cases include missing scores

Table 4.3 and the means plot below show the monthly means for the classrooms observed on four measures. As with the other CLASS assessments, we see relatively consistent scores for these classrooms from month to month, with some dips and peaks. ANOVAs did not yield statistically significant results, but that is expected with the sample size of just one classroom for the majority (seven) of the months observed.



## Conclusions

- The nature of the data limits our ability to make meaningful longitudinal comparisons of means with sufficient sample sizes across all measures. Any statistically significant results are likely explained by the dips and peaks we see in the means plots.
- Although there are slight variations in means from some months, the scores across all measures on all three observation sheets remained relatively consistent. The means plots demonstrate scores generally ended where they started or were flat across the 12 months.
- The limitations to the nature of the CLASS assessment, its collection and the sample sizes prevent us from making generalizations about whether or not the wage increase had an effect on CLASS assessment scores.

## DISCUSSION

The data suggests the wage increase policy appears to be successful in many ways. As part 1 describes, the wages increased 42%-72% for full time employees. In part 2, derived from in-person interviews, participants perceived an improvement in their material and mental well-being due to the wage increases. Also, many participants believed these increases led to higher quality instructional practices. As the quantitative data shows in part 3, financial security improved from January to December specifically as it relates to worrying less about money or running out of money. Additionally, financial security for utilities, reliable transportation and food appears to have improved. Generally, the participants are satisfied and remain enthusiastic about their jobs. In part 4, we analyzed the CLASS assessment data. While the nature of the data limits our ability to make meaningful longitudinal comparisons, the average scores across all measures on all three observation sheets remained relatively consistent.

Below we will discuss these findings in terms of the current research literature. First, we will discuss the sources and state of wages for ECE educators. Next, we investigate the potential of higher wages to affect instructional capacity of a center. Third we will focus on the psychological effects of improved mental well-being of ECE educators as it relates to the reduction of financial hardships. We will conclude with a discussion of the relationship between higher wages and efforts of accreditation.

### *Policy Context and Wages*

In 1971, President Nixon vetoed the Comprehensive Child Development Act, which would have created a federally funded public childcare system and provided universal Pre-K in the U.S. Twenty years later, in 1990, the Child Care and Development Block Grant (CCDBG) established the Child Care and Development Fund (CCDF) program. The Block Grant is administered by states, territories and tribal lands and uses vouchers to fund early childhood education. These vouchers can be used at a wide array of early childhood education facilities, including private, for-profit child care centers and unlicensed centers. While foundational, the Block Grant delivered less than half of the funding that the 1971 Act would have provided (Whitebook et al., 2014). Due to inadequate funding, parents and their children often first have to sign up on waiting lists to access CCDF subsidies (Whitebook et al., 2014). Recently, President Biden's

“Build Back Better” Act would have provided free, universal Pre-K and expanded child tax credits. The plan required states to use federal funds to raise early childhood teachers’ wages and provide for further training and professional development. With its failure to pass in the senate, ECE remains fragmented and underfunded.

ECE educators’ inadequate wages are a symptom of this fragmented ECE policy environment. While the 21<sup>st</sup> century has seen increasing research documenting the importance of early childhood development and a resulting rise in expectations of early childhood teachers (NICHD Early Child Care Research Network, 2005), their wages remain alarmingly low. Policies like the CCDBG Act of 2014 set aside funds intended to enhance quality at ECE centers, but teacher salary is not listed among the ten options for quality activities (Office of Child Care, 2020). This despite long standing evidence that teachers’ wages are “essential determinants of the quality of care” (Whitebook et al., 1989. p. 112). Instead, the CCDBG limits quality enhancement funding to compliance and professional development activities (Office of Child Care, 2020).

With limited public funding, parents’ tuition payments are the main contributor to ECE organizations’ funds (McClellan et al., 2021; Whitebook & McClellan, 2017). Whitebook and McClellan (2017) found “ECE providers are faced with the difficult task of trying to provide a high-cost service at prices parents can afford, and teacher wages tend to bear the brunt of this dilemma” (p. 8). As a result, early childhood teachers, who are predominantly women from racially marginalized groups, are paid “unlivable wages” (Whitebook et al., 2014, p. 10). A 2020 Center for the Study of Child Care Employment (CSCCE) study found the national median annual pay of child care workers and preschool teachers was \$24,230 and \$30,520 respectively (McClellan et al., 2020). This pay often does not come with health care or sick leave (Totenhagen et al., 2016).

The poverty rate of early childhood teachers in Texas, where this study took place, is 18.6% (McClellan et al., 2020). Many early childhood teachers rely on public income support programs like the Federal Earned Income Tax Credit (EITC), Medicaid, the Children’s Health Insurance Program (CHIP), the Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) (Whitebook et al., 2018). Their voices are excluded from the policy arena (Whitebook & McClellan, 2017). The result is a field with high teacher

dissatisfaction and turnover (Bridges & Carlat, 2003; Johnson et al., 2004; Hale-Jinks et al., 2006).

The results of this study indicate the teachers at this center prior to the wage increase policy were approximately \$10,000 below the national median income level. After the wage increase, we see they made approximately the national median income level. As is clear from the data, this increase made a big impact on the lives of the educators. They often used the wage increase to address the need for paid sick leave, making the calculation that they could miss some hours to tend to their health or family members health and still make their monthly bills due to the wage increase.

Also, the director was very much aware of the dilemma described above. While she would like to improve wages for the educators, she is also aware that in her neighborhood context it would be untenable to raise tuition rates. When asked about the dilemma directly she noted centers like hers falls through the cracks because only 30% of the children qualify for subsidies under the Texas system, however she feels none of her parents can afford a raise in tuition. At the time of the production of this report she was still examining alternative funding sources to extend the wage increase policy because she believes the children in her care are better off as a result.

### *Wage Increase and Retention*

The director's perspective aligns with the current study of ECE. Research has shown even the most motivated and effective ECE teachers are unlikely to remain in the profession because of the challenges they experience from low wages (Boyd, 2013; Schaack, et al., 2022).

Conversely, wage increases may lead to declines in financial hardship for basic living expenses (Collyer, 2020). This is particularly important, as ECE teachers who tend to have lesser financial hardship have been found to provide more positive classroom environments for children (King et al., 2016).

Indeed, our participants reported a reduction of financial hardships and its relationship to being able to “tune” into the needs of the children. In addition, the participants felt the wage increase improved the collegial relationships across the center. In addition, the director and educators all recognized a reduction in turnover. These three results combined led to a perceived

improvement in educator presence and consistency in the classroom. These findings support the work of Schaack and colleagues (2022) who found organizational factors and increased resources motivate ECE teachers to stay in the profession.

### *Psychological Well Being and ECE*

Our results also resonate with work on the effects of improved mental health. Indeed, using frameworks such as *Self-Determination Theory* and *Basic Psychological Needs Theory*, psychology researchers have built a foundation for growing empirical evidence supporting claims there is a positive relationship between mental well-being and needs satisfaction (Reis, et al., 1998; Lombas & Esteban, 2018; and Vermonte, et al., 2022). This correlation suggests you can positively predict mental well-being when basic psychological needs are met. Consequently, Vermonte, et al., (2022) contended the “frustration of the psychological needs may increase individual’s vulnerability for maladjustment” (p. 258). Basically, when one’s needs are not met, there is an increasing probability one will suffer from poor mental health. To make the relationship more complex, a confounding variable, structural inequality, threatens the achievement of needs satisfaction and mental well-being for particular groups (Robertson, 2014). In the research these groups have included minority workers of color. It is noteworthy that women of color, as a group, suffer the most from structural inequality. When we apply these principles to employee compensation, the assumption is that needs satisfaction and mental well-being relate to structural inequality for minority groups (Robertson, 2014). For example, if minority workers are predisposed to structural inequality, such as low wage early childhood educators, their ability to fulfill their needs deteriorates.

The effects of poor mental well-being have been associated with one’s ability to care for children. Specifically, teacher efficacy has been linked to mental well-being (Collie et al., 2016; Skaalvik & Skaalvik, 2014). In addition, Jeon et al. (2018) found that working conditions in early childhood education were a predictor of depression and emotional exhaustion. As in the case study presented here, it appears that as the ability of the teachers to fulfill their needs improved, so did their sense of efficacy. It also seems the educators’ sense of exhaustion was alleviated as they sought to further their education and learn from the coaching.

## *Accreditation*

Early education teachers are a key element of quality in the development of an equitable ECE system. However, as mentioned above, much of the ECE policy environment is characterized by many scholars as “haphazard, idiosyncratic [and] incoherent” (Whitaker, Jenkins, & Duer, 2022 p. 59). That said, since the early 20th century, “the nature and needs of children have been the primary basis for informing early childhood curriculum and pedagogy” (Castner, Fajerstein, & Butera, 2022 p. 1048). In early childhood education, accreditation is a sign of quality and in the U.S., the child centered approach advocated for by the National Association for the Education of Young Children (NAEYC) is the standard (Castner, Fajerstein, & Butera, 2022; Ishimine & Tayler, 2014). Importantly, early childhood education standards worldwide advocate for a teacher role that respects “individual differences and provide[s] maximum support to each child in his/ her overall development. The quality of the educational process is therefore based on the individual approach” (Viskovic, 2021 p. 1723). Given the importance of the teacher’s role in the development of each child in ECE, teacher well-being is central to success. The center under study was working to gain a higher level of accreditation while experiencing a shift in wage policy as an attempt to move toward greater equity. Many of the respondents pointed to the extra incentive to change their practices as connected to the wage increase. The coincidence of these policy changes led to a reciprocal relationship between the two. That is, the raising of standards and of wages at the same time was mutually beneficial.



## CONCLUSION

Looking across the parts of our report, it seems the discussions of reduced stress and their pride in being able to provide for their loved ones found in the qualitative data resonates with the findings in the quantitative well-being survey. While we did not detect changes in the classroom environment between January to December from the CLASS assessment data, the interviews showed improvements the CLASS assessments might not be designed to measure. Specifically, teachers are more motivated to do the work to meet the rising standards through teamwork. Importantly, the teachers also reported being more present and in tune with the children and their needs over the course of the year.

# RECOMMENDATIONS

- Continue to explore the wage increase policy sustainability and extend the duration of the pilot program at this center.
- Develop plan for continued wage increases over time to instigate further improvement in the areas of food, transportation and housing in the lives of the educators.
- Extend the wage increase policy to additional centers.
- Develop a working group of ECE center directors to discuss wage increase sustainability.
- Improve the utility of the CLASS assessment by comparing to pre-wage increase data and/or look more closely at one or a few measures related to the qualitative findings (e.g., positive climate).

## REFERENCES

- Boyd, M. (2013). " I Love My Work But..." The Professionalization of Early Childhood Education. *Qualitative Report, 18*, 71.
- Bridges, M., & Carlat, J. (2003). Training and Retaining Early Care and Education Staff. Bay Area Child-Care Retention Incentive Programs: Evaluation. Year One Progress Report, 2001-2002. PACE Policy Brief.
- Castner, D. J., Fajerstein, L., & Butera, G. (2022). The Good that's Within You: A Case Study of Early Childhood Curriculum Practice. *Early Childhood Education Journal, 1*-12.
- Collyer, S. (2020). At what point do wages make ends meet? Investigating the relationship between wages and material hardship in New York City. *Families in Society, 101*(3), 289-307
- Hale-Jinks, C., Knopf, H., & Knopf, H. (2006). Tackling teacher turnover in child care: Understanding causes and consequences, identifying solutions. *Childhood Education, 82*(4), 219-226.
- Ishimine, K., & Tayler, C. (2014). Assessing quality in early childhood education and care. *European Journal of Education, 49*(2), 272-290.
- Jeon, L., Buettner, C. K., & Grant, A. A. (2018). Early childhood teachers' psychological well-being: Exploring potential predictors of depression, stress, and emotional exhaustion. *Early education and development, 29*(1), 53-69.
- King, E. K., Johnson, A. V., Cassidy, D. J., Wang, Y. C., Lower, J. K., & Kintner-Duffy, V. L. (2016). Preschool teachers' financial well-being and work time supports: Associations with children's emotional expressions and behaviors in classrooms. *Early Childhood Education Journal, 44*(6), 545-553.

Lombas, A. S., & Esteban, M. Á. (2018). The confounding role of basic needs satisfaction between self-determined motivation and well-being. *Journal of Happiness Studies*, *19*, 1305-1327.

McLean, C., Austin, L. J., Whitebook, M., & Olson, K. L. (2021). Early childhood workforce index 2020.

NICHD Early Child Care Research Network (Ed.). (2005). *Child care and child development: Results from the NICHD study of early child care and youth development*. Guilford Press.

Office of Child Care, 2020 *The Fundamentals of CCDF Administration: Resource Guide*. U.S. Department of Health and Human Services.

Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J., & Ryan, R. M. (2018). Daily well-being: The role of autonomy, competence, and relatedness. In *Relationships, well-being and behaviour* (pp. 317-349). Routledge.

Robertson, P. J. (2014). Health inequality and careers. *British Journal of Guidance & Counselling*, *42*(3), 338-351.

Schaack, D., Donovan, C., Adejumo, T. & Ortega, M. (2022) To Stay or to Leave: Factors Shaping Early Childhood Teachers' Turnover and Retention Decisions, *Journal of Research in Childhood Education*, *36*(2), 327-345

Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological reports*, *114*(1), 68-77.

Totenhagen, C. J., Hawkins, S. A., Casper, D. M., Bosch, L. A., Hawkey, K. R., & Borden, L. M. (2016). Retaining early childhood education workers: A review of the empirical literature. *Journal of Research in Childhood Education*, *30*(4), 585-599.

Vermote, B., Waterschoot, J., Morbée, S., Van der Kaap-Deeder, J., Schrooyen, C., Soenens, B., & Vansteenkiste, M. (2022). Do psychological needs play a role in times of uncertainty? Associations with well-being during the COVID-19 crisis. *Journal of Happiness Studies*, 23(1), 257-283.

Viskovic, I. (2021). Inclusive Pedagogical Practice as a Predictor of Quality Early Childhood Education. *European Journal of Educational Research*, 10(4), 1711-1725.

Whitebook, M., & Granger, R. C. (1989). " Mommy, Who's Going to Be My Teacher Today?" Assessing Teacher Turnover. *Young Children*, 44(4), 11-14..

Whitebook, M., Phillips, D., & Howes, C. (2014). Worthy work, STILL unlivable wages: The early childhood workforce 25 years after the National Child Care Staffing Study.

Whitebook, M., McLean, C., Austin, L. J., & Edwards, B. (2018). Early Childhood Workforce Index 2018. *Center for the study of child care employment, university of California at berkeley*.

Whitaker, A. A., Jenkins, J. M., & Duer, J. K. (2022). Standards, curriculum, and assessment in early childhood education: Examining alignment across multiple state systems. *Early Childhood Research Quarterly*, 58, 59-74.

## APPENDIX: METHODOLOGY

We developed a case study of a single ECE center that implemented a wage increase policy. Quantitative and qualitative data was collected from January 2022 through December 2022. Overall, we were analyzing the data in order to understand the potential effects the wage increase policy had on the center and the teachers.

Our quantitative analysis began with organizing and compiling the wage, CLASS assessment and well-being survey data by teacher, pay period and month. We computed descriptive statistics for each data point, including mean, standard deviation, median, minimum and maximum. For the well-being data, we ran one-way ANOVA in order to statistically compare means over time. For the CLASS assessment specifically, post-hoc tests were unable to be completed due to samples sizes of 1 or less, so we relied on descriptive means to make meaning of any statistical significance.

Qualitatively, data was collected over the course of 12 months through interviews, observations and document analysis. Interviews with the director and the educators were performed just prior to the wage increase and then again, every few months over the next several months. On-site observations were conducted simultaneously with the interviews. Finally, policy and operating procedure documents were collected over the course of the 12-month period.

Our analysis of this rich data set proceeded with a systematic effort. Analysis of the transcripts, observation notes and collected documents consisted of three phases of coding. In an initial round of coding, we used a series of open codes related to supervision, the allocation of resources and implementation processes. The second round of coding drew on themes derived from the initial coding process and an iterative consultation with literature. In the final round of coding major themes will be derived from previous rounds of coding.



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# ADDITIONAL FINDINGS

The purpose of the report presented was two-fold:

1. Examine the impact of a wage increase for early childhood educators on their well-being.
2. Examine the impact of a wage increase for early childhood educators on the quality of instruction.

The findings provided are a direct response to the initial goal created collaboratively between United Way of San Antonio and Bexar County and Brewer Consulting. Yet, there were numerous findings identified over the course of the project that fell outside the scope of the researchers' report.

The findings presented addressing the well-being of early childhood educators and the quality of instruction succeeded in validating many of our preconceived notions, but the report as presented is limited in addressing the impact of a wage increase on the early childhood education center itself. It is our belief these findings, in conjunction with the findings presented within this report, tell a more comprehensive narrative of the impact of increasing wages within early childhood education.

Below are key findings over the project year collected and analyzed outside the structure of the researchers' report:

## **DECREASE IN STAFF TURNOVER**

The high turnover rate of educators for the participating early childhood education center was a primary rationale of the center being selected for this study. In 2020, the turnover rate for the participating center was 116%. In 2022, the single variable addressed by the study aligning with retention/turnover was a wage increase for all educators within the participating center. With the increase in pay, the participating center experienced a significant decrease in turnover down to 30% for the year 2022.

## **INCREASE IN ENROLLMENT**

The participating early childhood education center opened two additional classrooms previously vacant for multiple years. The center director attributed the wage increase to providing a more positive environment for all. One indicator of this change in environment was an increase in positive online reviews leading to an increase in interest in center attendance. This necessitated hiring four new educators who were hired at a wage on level with project participants to staff the two additional classrooms.





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## **ACHIEVEMENT OF TEXAS RISING STAR CERTIFICATION**

The pathway to achieving Texas Rising Star certification is unique to each early childhood education center pursuing quality certification. The participating early childhood education center had been on a quality pathway journey for two years prior to this study. The positive impacts of the wage increase on organizational culture, including staff retention and increased teacher buy-in, allowed the director to feel more confident in submitting the Texas Rising Star Interest Form months earlier than anticipated to begin the quality certification process. The center application was successful, and the director was assigned a Texas Rising Star mentor.

## **CREATION OF BUSINESS MODEL**

At the inception of the project, a business coach worked alongside the center director and United Way staff to create an early childhood education quality business model. Prior to the project, the participating center director owned and managed the center for two decades without an identified business model. Previous research informed both United Way and the researchers an absence of a business model for early childhood education centers was the norm for the sector. The business model created during this project will be utilized as a template to be shared across twenty-eight centers involved in our Building Quality Initiative (BQI).

## **SUSTAINING WAGE INCREASE**

United Way committed to providing a one-year investment to the participating early childhood education center to increase wages for the year 2022. There was a mutual understanding the financial investment would end at the end of the year and wages would go back to their initial levels. With the support of an emerging business model for quality early childhood education, the center director has committed to maintaining all educator wages at a minimum level of \$13/hour. Some veteran educators involved in the project will remain at \$16/hour (originally \$10/hour) and the assistant director will remain at \$18/hour (originally \$12/hour).