Continuous Improvement Program for Public Elementary School Teachers
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Abstract:
The Education System plays an integral part in the lives of the youth. Continuous Improvement Program is a very essential program in the development and improvement of the Educational system. It also enhances the Quality of Education. This article investigates the role of Continuous improvement program in the Educational Setting and the modes on how the organization evaluates the program. It analysis of how vital the improvement and its elements that make up the change in the quality of education.

Index of Terms:
PDSA- Plan, Do, Study, Act
SIP- School Improvement Plan
LAC- Learning Action Cell
AIP- Annual Improvement Plan
SIP- School Improvement Plan
CAEP- Council for the Accreditation of Education Programs
Positive deviance-This is a process to investigate the differences across sites that underlie an average
Kaizen is a Japanese term that stands for "change for the better"
Catalyst- an agent that speed significant change or action.

I. INTRODUCTION
Continuous improvement is a system used by an organization to improve its organization through monitoring and analyzing information to create positive changes that improve future result in the performance of employees. Continuous improvement requires the alignment of a school or district’s goals, people and values. This is continuous process; continuous improvement is an ongoing process of learning, reflecting, monitoring and evaluating for success. The term “continuous improvement” has become almost ubiquitous across a range of organizational functions and research fields. To review the term from a holistic perspective, a systematic literature review method is applied. To structure the findings from the systematic literature review, a theoretical framework provided by Schmenner and Swink (1998), is used to assess if a theory of continuous improvement already exists. The literature is reviewed with the aim of testing if “continuous improvement” stands up to the five tests of a good theory, proposed by Schmenner and Swink (1998) “Continuous improvement is the result of a realistic system of continual improvement driven by customer needs, expectations, and requirements.” - Jim Shipley and Associates, Inc. These are the steps in an improvement process. PDSA is a powerful model for improvement. It is a four step management method to enhance the performance in an organization. They can be used to begin with your goal to build a process and to improve processes which already exist in the organization. PDSA is a valuable tool in which the organization aims to develop change thru planning-setting a goal, doing something in achieving the goal, evaluate if the goal is accurate in the organization and act on it by determining factors that can enhance improvement. Other widely used methods of continuous improvement, such as Six Sigma, Lean, and Total Quality Management, emphasize employee involvement and teamwork, work to measure and systematize processes, and reduce variation, defects and cycle times. Its primary aim is to seek the importance of Continuous Improvement in Education. The Educational System plays a vital role in the improvement of the quality of education and continuous improvement is a must in the organization. Change is a continuous process and it doesn’t stop. The educational institution has embraced all the changes. The process set goals, identify ways to improve, and evaluate change. The significance of continuous improvement in an organizational institution is discussed in the reviews. We need continuous improvement in the Organization. With the fast growing changes like innovation in technologies and dealing with the 21st century learners, we as educators must meet the needs of the learners. Changes should be made to meet the needs of the learners and to provide quality of education.

II. RESULTS
Sparks (2018) mentioned Continuous school improvement is a cyclical process intended to help groups of people in a system—from a class to a school district or even a network of many districts—set goals, identify ways to improve, and evaluate change. The most common approaches seem to share a few concepts, such as: looking at problems as part of a system rather than as isolated episodes; working to improve policies and processes within that system; repeatedly testing assumptions
about the causes of problems and their possible solutions; and involving those most affected by changes—like teachers and students—in deciding what tweaks to make. “We don’t want random acts of improvement,” said Patricia Greco, the superintendent of the Menomonee Falls, Wis., school district.

Susan Greer (2018) mentioned that Continuous improvement is a process used by an organization to improve its results through monitoring and analyzing data to create changes that improve future performance. Continuous improvement requires the alignment of a school or district’s goals, people and values. This process does not start and stop; continuous improvement is an ongoing process of learning, reflecting, monitoring and evaluating for success. Examining the relationships between the seven categories of high performance: Leadership, Strategy, Customers, Measurement, Workforce, Operations, and Results from Baldrige Criteria for Performance Excellence using a linkage chart is a good place to start taking a big picture look at processes and organizations. Additional information on the seven categories can be found on the Categories for Building an Integrated Management System website. Sheer (2018) mentioned that we need to understand the problem first, identifying the problem will help us. According to Biag brainstorming within the organization helps make a solution to the gap. Biag said, “It means an actual change in how you do work.” In other words, the focus is on the process and results in action. Change ideas are not things like “more money” or “more staff.” “It’s an actual change of a process or the introduction of a new process” Biag said. Carnegie uses a “Plan, Do, Study, Act” (PDSA) cycle for testing ideas. The changes should be fairly small and the tester collects data along the way. It doesn’t have to be complicated data, just something to help analyze and track whether the change is moving the needle. When you present an idea for a change they should expect an effect to it. If it doesn’t work then the organization learn from it. Many of the best change ideas come from looking at what Carnegie calls “positive deviants” -- the bright spots in a network. “As you’re testing and building evidence you’re going to find ideas that work and then you can talk about spreading those ideas,” Biag said.Biag expressed the idea of shared knowledge, ideas and experiences that will to increase positive change. Shared experiences means shared learning. In our case, In the Philippines we have group discussion and LAC Session wherein we discuss positive experiences that enables the shared knowledge and shared experiences become learning that helps build change in our strategies in teaching. The learnings in the Seminars wherein the coordinators and other teachers attended are shared through LAC Session so that they spread change in the way we teach out student. It also enables us to refresh our mind with what we already know and recognize the techniques and strategies that makes us effective inside the classroom setting. Another strategy is to roll out the idea with those eager to try it and then demonstrate success to those who are more fearful. It’s also necessary to be humble and willing to go back and test new ideas if the ones that seemed to work in the smaller group don’t work when scaled. Perhaps the aim statement needs to change, or maybe the drivers aren’t actually the most impactful. People learn how to think about continuous improvement through the process of doing it. They get better at narrowing in on motivating, but achievable aim statements. They learn to include more voices in the information gathering stage. The “Plan, Do, Study, Act” cycles become second nature, and analyzing data gets less scary. One of the best parts of continuous improvement is that it helps empower those within a system to see themselves as the drivers of change. What seems to be scary at first becomes a practice and then see themselves as a catalyst of the changes in the organization. Standards, developed by the Council for the Accreditation of Education Programs (caep), require teacher education programs to demonstrate their graduates are capable of having strong positive effects on student learning. The data and methods required to evaluate the effectiveness of teacher education programs ought to be informed by well-established scientific methods that have evolved in the science of psychology, which at its core addresses the measurement of behavior. Recent work highlights the potential utility of three methods for assessing teacher education program effectiveness: (1) value-added assessments of student achievement, (2) standardized observation protocols, and (3) surveys of teacher performance. In the Philippines setting, teachers are given Phil-Iri in Filipino and English wherein they are evaluated on how they read and comprehend. Remediation will be done after finding the results to those students who did not meet the standards. Report of MPS Rating shall be submitted every grading period to measure the performance of the student per subject. Also teachers are being observed in their classroom to give technical assistance to the teachers to improve their performance. A total of 4 COT is required for every teacher so that continuous improvement may be done. The teacher has a conference afterward to evaluate her positive points and to help her improve the weak points that will enable to become an effective teacher. Herold( 2018) mentioned the aim of continuous improvement was to help teachers use data, pulled primarily from existing student-information systems, to "identify student needs, provide appropriate interventions, and ultimately increase college readiness."The tool the district developed was "a dashboard pulling up live data” on such indicators as student attendance and access to financial-aid counseling, said Cecilia Oakeley, who started with the district in 2005 and is now an assistant superintendent for evaluation and assessment. Reh (2018) mentioned Continuous improvement is a critical dimension of all major quality frameworks and methodologies, including Six Sigma, ISO, and Baldrige. Organizations dedicated to continuous improvement recognize the importance of these actions for strengthening the quality of a product, improving customer satisfaction, and for improving efficiency, productivity and profits, PDCA is most often a circle with no beginning or end, meaning that continuous improvement is a process that never stops. Remember, the process is a cycle. If the test fails, repeat the entire process. If it works, monitor results and start over again with a new plan to promote additional improvements. The work of continuous improvement is never-ending. Kaizen supports the perspective that everything can be improved, even if it's incremental. Continuous incremental improvements over time are viewed as desirable and can translate into improved quality, reduced costs, simplified work processes, less waste, and improved customer satisfaction and profits. Vermont ( 2018) mentioned ). In contrast to an external accountability motive, a continuous, quality improvement approach involves connecting systemic process/practices and outcomes; focusing on problems of practice; contextualizing solutions; and focusing on internal accountability among all members of the organization as a primary driver of improvement (O’Day and Smith, 2016). When applying methodologies congruent with improvement science,
such as Lean, Six Sigma, Implementation Science and Plan-Do-Study-Act cycles of learning, the underlying philosophy is that all processes can be continually improved (e.g., LeMahieu, Nordstrum, and Greco, 2017). Such approaches are aimed at preventing the trend in which highly rated schools become complacent, while low performers may be discouraged from getting the nuanced data they need to improve. As a comprehensive approach to continuous improvement, improvement science principles are congruent with the ongoing efforts in which many Vermont schools are engaged, such as implementation science. By adopting an improvement science approach, school systems can apply Plan-Do-Study-Act (PDSA) cycles to innovate, test, review, and revise improvement strategies (e.g., Deming, 1993; Langley et al., 2009). The PDSA cycle is a scientific method for making hypotheses about the efficacy of proposed solutions on standard work, processes and outcomes (LeMahieu, Nordstrum, and Greco, 2017). These cycles are customized for the purposes of piloting innovations or interventions (in the pilot phase of improvement), as well as fully embedding the change into the standard work of the system (during the implementation phase). Robert K. Wysocki, (2017)Declaration of Interdependence (DOI) has become the de facto standard for assessing the performance of a complex project. That performance is measured in two ways: how the process performed and to what degree the client was satisfied by the product or service delivered. Measuring against this standard, you will gain an understanding of the real business value that comes from having customized the ECPM Framework to your organization’s processes and practices. In this article we integrate the 6 DOI Principles into the ECPM Framework as the metrics for assessing the performance of the process and product. The DOI Principles then give rise to metrics that can be used to conduct a continuous process/product improvement program concurrently with the planning, set-up and execution of the project. Complex projects are learning and discovery projects and the DOI is the tool that enables that learning and discovery to take place in real time. This integration is significant because it gives us a deeper understanding of how complex projects can be more effectively managed so as to deliver successful business outcomes. In every complex project is a window of opportunity to learn and discover how to improve the process as well as the product or service becoming created. That learning and discovery is valuable for the current project as well as all future projects. It is a resource that cannot be found elsewhere. The integration of continuous process and product improvement establishes an infrastructure for delivering success. We have imbedded that improvement effort into the project as it is being executed. That gives us immediate feedback Raafat A. Samman, Jamal Ouenniche (2016)In practice, the diversity of management philosophies, quality programs, and quality tools has resulted in many quality consulting firms to be established most often offering the same product under a different packaging. This continual repackaging of quality programs for marketing purposes has led to confusion and resulted in organizations often abandoning a specific quality program in favor of another, although programs could be complementary in nature. In an attempt to assist organizations in making informed decisions with respect to the choice of continuous quality improvement programs (CQIPs), we survey and critically analyze the landscape of research on CQIPs, highlight similarities and differences between the underlying quality philosophies, and discuss the limitations of the current generic designs of CQIPs; namely, Just-in-Time(JIT), Benchmarking, Kaizen, International Organization for Standardization (ISO), Business Process Reengineering (BPR), and Six Sigma. Our analysis of the literature revealed that, with the exception of Six Sigma, most published design and implementation procedures of CQIPs ignore a problem definition phase, most programs ignore performance measurement and evaluation as a formal phase along with the specification of the relevant criteria according to which performance is to be assessed, most programs lack the explicit integration of auditing, monitoring, control and feedback mechanisms, most published research on quality programs tend either to ignore the explicit integration of quality tools or to refer to a very limited number of potential tools without any guidelines as to which phases they could be used at, most continuous quality improvement programs lack a theoretical grounding in management theories as well as conceptual models, and no published research formally integrates critical success factors into the design methodology of a quality program. In this paper, we attempt to address this last methodological problem by proposing a classification of critical factors of CQIPs that could be used to assist managers in designing and customizing specific programs to their specific environments. In addition, we discuss the potential benefits of hybridization of quality philosophies and programs whereby several quality philosophies, concepts, programs, and tools are coherently integrated into a hybrid CQIP for the purpose of improving quality and reducing waste. Finally, we outline some future research directions. In the Philippines, as per DepEd Order No. 23, s. 2015, The Department of Education issues a memorandum to enhance the quality of education with Planning and implementation of school improvement projects that address problems related to the teaching-learning processes should involve the members of the school’s LACs. In the same way, activities of LACs should be aligned to the SIP or AIP. Lac members may also include reports of their activities in the SRC. The School Improvement Plan (SIP) is a roadmap that lays down specific interventions that a school, with the help of the community and other stakeholders, will undertake within a period of three consecutive school years. The implementation of development activities integral to it are in the school such as projects under the Continuous Improvement Program (CIP), the creation and mobilization of Learning Action Cells (LACs), and the preparation of the School Report Card (SRC). SIP seeks to provide those involved in school planning an evidence-based, systematic approach with the point of view of the learner as the starting point. Ultimately, it is envisioned to help schools reach the goal of providing access to quality education. The participation and involvement of the school head, teachers, and staff in the planning and implementation of the SIP and SRC may be included in the Results-Based Performance Management System (RPMS) as performance objectives under corresponding Key Result Areas. It can be incorporated in the Individual Performance Commitment and Review Form (IPCRF) of teachers and staff or in the Office Performance Commitment and Review Form (OPCRF) of the school head. Gina M. Alvarado (2015) mentioned that teaching improves faculty instructional performance by innovating their teaching practices, helping their students to think on their own, motivating their students, getting control over their classroom, teaching with more passion, improving their confidence, helping them make informed
decisions, learning new concepts of teaching, analyzing critical incidents in class, and reflecting on critical life incidents as educators. Using action re-search and the reflective approach to teaching improves students learning by developing their Critical-thinking and practice independent learning, motivating them to study and develop effective study habits, helping them understand concepts better, thus, improve their self-confidence. The faculty-respondents have realized the importance of conducting action re-search and using the reflective approach to teaching for the improvement and enhancement of their instructional performance as well as their students’ learning. The main purpose of reflection is to analyze and learn from experience, rather than just living the experience. It helps teachers refine their own understanding of themselves and their classroom practice, thus increasing their students learning. Jose Nicolas Mora (2014) Nowadays the companies live in a constant changing world where customers demand better products, higher quality and shorter delivery times. To achieve these customers requirements companies rely on Continuous Improvement to reach their goals but without having a clear strategy for it. In paper it is discussed in a literature review, the origin, definition and most used tools of CI. Then it is analyzed if the Learning School for strategy fits with CI to help in the creation of a strategy for CI. CI has been an important part of manufacturing history since the Stone Age, humans are always looking for a better way to do their jobs or improve their tools. But in this paper it will be discuss the CI process that has been developed in the last century and that is dedicated to industrial manufacturing. Some of the first improvement programs appeared in the 1800s, where management encouraged the employees to provide process improvements, and motivate them with incentive programs (Schroeder and Robinson, 1991). In early 1900s the scientific management emerged and this involved developing methods to help managers analyze and solve production problems using scientific methods (Bhuiyan and Baghel, 2005). With these firsts two references it can be seen that management and CI have a strong relationship between them. CI methodologies continued evolving and manufacturing companies also started to improve their process. Sandra Park, Penny Carver, Lee Nordstrom, Stephanie Hironaka (2013) illustrate how continuous quality improvement methodology is being applied in education toward the goals of making education more efficient, effective, and equitable. The examples are organized in three broad categories: at the level of classroom instruction, system-wide, and improvement efforts with collective impact. It attempts to map the landscape of this terrain by identifying and describing organizations engaged in continuous improvement, and by highlighting commonalities and differences among them. The findings classify three types of organizations engaged in continuous improvement: those focused on instructional improvement at the classroom level; those concentrating on system-wide improvement; and those addressing collective impact. Each type is described in turn and illustrated by an organizational case study. Through the analysis, six common themes that characterize all three types of organizations (e.g., leadership and strategy, communication and engagement, organizational infrastructure, methodology, data collection and analysis, and building capacity) are enumerated. Aguilar (2013) mentioned that There's generally an agreement that educators need more knowledge, skills, practice, and support after they enter the profession. Malcolm Gladwell, the author of Outliers: The Story of Success (2008), calculates that it takes ten thousand hours of deliberate practice--practice that promotes continuous improvement--to master a complex skill. This translates into about seven years for those working in schools. The majority of teachers and principals want professional development; they want to improve their craft, be more effective, implement new skills, and see students learn more. Annenberg report is that effective embedded professional learning promotes positive cultural change. The conditions, behaviors, and practices required by an effective coaching program can affect the culture of a school or system, thus embedding instructional change within broader efforts to improve school-based culture and conditions. Aims to promote cultural change in the skills to be more effective is a big step toward continuous improvement. URC (2012) mentioned that Improvement science inexorably necessitates our delineating the second term, ‘quality improvement’. Quality improvement is the disciplined use of evidence-based quantitative and qualitative methods to improve the effectiveness, efficiency, equity, timeliness or safety of service delivery processes and systems (inclusive of the human resources within that system) toward the pursuit of better services or outcomes for ‘users’ or customers of the system. Bryk, Gomez & Grunow (2010) mentioned that Strategies for the utilization and adaptation of evidence-based quality improvement methods should themselves be based on a foundation of evidence. In this sense, improvement science seeks to discern what works for addressing a particular problem, for whom, and under what set of specific conditions. Stephen Anderson, RoshniKumari (2009) investigates conceptually and practically what it means for schools to engage in the practice of continuous improvement. The analysis draws upon prior research and discussion to predict core elements of the practice of continuous improvement in schools. The predictions are then applied to a case study of continuous improvement efforts in a Pakistani secondary school that was involved in a 10-year school–university school improvement partnership. The article concludes with a set of eight empirically based propositions about the practice of continuous improvement schools. Aumiller, Barbara Elaine (2008) mentioned that the study focused on continuous improvement, systemic planning, challenges of implementing the Baldrige Criteria, and the Board of Education role in affecting organizational change. This study advances both the understanding of the Baldrige framework in education and effective leadership practices for successful implementation. Three themes emerged: (a) The Baldrige Criteria raises the ceiling of continuous improvement for high-performing school districts, (b) external feedback is critical to guide continuous improvement efforts, and (c) effective leadership is an indispensable organizational ingredient to establish a continuous improvement culture. Truly feedback plays an important part wherein the voice of the clients is taken into consideration to promote development and continuous improvement in an organization. Edutopia (2008) mentioned that Great teachers help create great students. In fact, research shows that an inspiring and informed teacher is the most important school-related factor influencing student achievement, so it is critical to pay close attention to how we train and support both new and experienced educators. The best teacher-preparation programs emphasize subject-matter mastery and provide many opportunities for student teachers to spend time in real classrooms under the supervision of an experienced mentor. Just
as professionals in medicine, architecture, and law have opportunities to learn through examining case studies, learning best practices, and participating in internships, exemplary teacher-preparation programs allow teacher candidates the time to apply their learning of theory in the context of teaching in a real classroom. It is critical for veteran teachers to have ongoing and regular opportunities to learn from each other. Ongoing professional development keeps teachers up-to-date on new research on how children learn, emerging technology tools for the classroom, new curriculum resources, and more. The best professional development is ongoing, experiential, collaborative, and connected to and derived from working with students and understanding their culture. A.K.Aggarwal, Veena Adlakha Tigineh Mersha (2005) Web-based education (WBE) is growing by leaps and bounds and is expected to reach more than 5 million people in 2006. The survival of institutions providing WBE depends on how successfully they deliver value to their customers. This paper presents a case study of the introduction and continuous improvement of a Web-based business program at a professionally accredited school of business in a public university. This school is one of the early pioneers in offering online education among public, professionally accredited schools of business. The paper discusses the school's motivations for introducing Web-based education, the process it utilized to launch the program, some of the challenges it encountered at different phases of the program's implementation, and the continuous improvement approach it utilized to overcome these challenges. This institution's experience may provide invaluable insight to other public universities that are considering launching online programs. Taking the term "continual improvement" first, it may at first appear pedantic to differentiate between "continual improvement" and "continuous improvement", however, although the difference may be subtle and the former term infrequently used, it is perhaps worth exploring the distinction as continual improvement rather than continuous improvement is the term preferred by Deming (2000) and by the International Organization for Standardization (ISO, 2015). The reason Deming and the ISO appear to make a point of using the term continual, rather than the more regularly used continuous, appears to be to deliberate, and is due to a subtle difference between the meanings of the two words. The adjective "continuous" indicates incessant and non-stop whereas the term continual describes something that is recurring and happens again and again, perhaps with pauses in between. Considering Deming's widely used PDCA (Plan Do Check Act) methodology, it is perhaps not surprising that Deming prefers the use of continual, which implies a regular stop in the process, in line with Deming's philosophy to regular Check and Adjust. Aidan Walsh, Helen Hughes (2002) mentioned the practice of total quality management (TQM) philosophy within companies operating in Ireland. The main objective of this study is to establish whether, or not, TQM philosophy is suitable for adoption by organisations in Ireland. The study is quantitative in nature and is based on the findings of two research questionnaires. Data from the research indicate that TQM activities are practised throughout Irish industry. Many organisations have adopted a TQM approach in a comprehensive manner and are committed to TQM activities for the long term. The majority of respondents indicated that their TQM programmes were successful. This bodes well for the continuance of TQM activities within these organizations. It is concluded that TQM philosophy is suitable for adoption by organisations operating in Ireland and that a TQM approach offers these organisations a platform for developing strategies that guarantee competitive eness and success.

III. SUMMARY

Continuous Improvement is a catalyst of change. It improves the organization give better services. Susan Greer, (2018) is a process used by an organization to improve its results through monitoring and analyzing data to create changes that improve future performance. Brainstorming within the organization helps make a solution to the gap. Reh (2018) mentioned Continuous improvement is a critical dimension of all major quality frameworks and methodologies, including Six Sigma, ISO, and Baldrige. Mora (2014) said Continuous improvement to reach their goals but without having a clear strategy. Herold (2018) mentioned the aim of continuous improvement was to help teachers use data, pulled primarily from existing student-information systems, to "identify student needs, provide appropriate interventions. Vermont (2018) continuous, quality improvement approach involves connecting systemic process/practices and outcomes; focusing on problems of practice; contextualizing solutions; and focusing on internal accountability among all members of the organization as a primary driver of improvement. LeMahieu, Nordstrom, and Greco, (2017). When applying methodologies congruent with improvement science, such as Lean, Six Sigma, Implementation Science and Plan-Do-Study-Act cycles of learning, the underlying philosophy is that all processes can be continually improved. Wysocki, (2017) Declaration of Interdependence, Performance is measured in two ways: how the process performed and to what degree the client was satisfied by the product or service delivered. Raafat A. Samman, Jamal Ouenniche (2016) In practice, the diversity of management philosophies, quality programs, and quality tools has resulted in many quality consulting firms to be established most often offering the same product under a different packaging. Gina M. Alvarado (2015) mentioned to analyze and learn from experience, rather than just living the experience. It helps teachers refine their own understanding of themselves and their classroom practice, thus increasing their students learning. In the Philippine Deped Order23 S. 2015 is envisioned to help schools reach the goal of providing access to quality education. Sandra Park, Penny Carver, Lee Nordstrom, Stephanie Hironaka (2013) Through the analysis, six common themes that characterize all three types of organizations (e.g., leadership and strategy, communication and engagement, organizational infrastructure, methodology, data collection and analysis, and building capacity) are enumerated. Aguilar (2013) mentioned that There's generally an agreement that educators need more knowledge, skills, practice, and support after they enter the profession. URC (2012) Quality improvement is the disciplined use of evidence-based quantitative and qualitative methods to improve the effectiveness, efficiency, equity, timeliness or safety of service delivery processes and systems. Aumiller, Barbara Elaine (2008) feedback plays an important part wherein the voice of the clients is taken into consideration to promote development and continuous improvement in an organization. Edutopia (2008) The best professional development is ongoing, experiential, collaborative, and connected to and derived from
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