The ADDIE Process

ADDIE is the acronym for the Analysis, Design, Development, Implementation and Evaluation instructional systems design process, which is currently accepted as an industry standard for instructional design and performance technology. ADDIE ensures a consistent and systematic process for design and development of highly efficient and effective systems without sacrificing creativity.

The ADDIE model consists of the following phases:

Analysis:	The process for analyzing needs that define desired outcomes.
Design:	The process of determining how desired outcomes are to be accomplished—based on supporting system(s) needed, required resources, timetable, and budget.
Development:	The process of establishing requisite system(s) and acquiring needed resources to attain desired outcomes.
Implementation:	The process of implementing design and development plans within the real-world environment.
Evaluation:	The process of measuring the effectiveness and efficiency of the implemented system and using collected data as opportunities for improvement in closing gaps between actual and desired outcomes.

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The ADDIE process provided the roadmap that was used to plan, implement, continuously evaluate, and improve the Central Educational Center (CEC). It is systematic in that each stage is reliant on the successful completion of the previous stage. An organization must understand the needs that drive its objectives, design a plan for how it is going to achieve these objectives, fulfill the plan through development of the necessary infrastructure, personnel, and resources to accomplish the stated objectives, implement the plan as designed and developed, and then evaluate the implementation looking for ways to continuously improve by closing gaps between the initial design objectives and the actual implementation.

The following are examples of steps to be taken while using the ADDIE process to develop an education center that meets local employer needs for a prepared workforce.

Analyze
- Bring community stakeholders together to examine community needs that can be addressed through education.
- Gather data on community and employer needs through conducting a formal assessment.

Design
- Design curriculum paths, courses, and dual enrollment opportunities based on the employer needs uncovered.
- Determine what would meet physical facility needs.
- Determine personnel needs to run the center.
- Design a charter with measurable objectives.

Develop
- Develop courses and articulation agreements for curriculum determined.
- Hire appropriate staff and ensure that they have the professional development and training to be successful.
- Locate a facility and determine funding for a sustained partnership.
- Renovate and equip facility, as appropriate.
- Acquire charter school status (develop charter).
- Ensure work-based learning and dual enrollment agreements are in place.
- Develop information and data system.
- Enroll students.

Implement
- Offer quality coursework in relevant technical skill areas.
- Convene advisory boards for continuous improvement of the curriculum and courses offered.
- Develop alumni association.

Evaluate
- Collect performance and satisfaction data.
- Conduct new community needs assessment regularly.
- Analyze data on student, parent, faculty, and employer satisfaction.
- Analyze performance data such as: student in-class and work-based learning performance; tardiness and absenteeism; student work ethic grades; standardized test scores; enrollment; drop-out rates; and post-graduation placement.

As an example, data on community and employer needs is gathered during the Analyze stage. This forms the basis for curriculum paths, courses, and dual enrollment programs in the design stage. The specific courses and articulation agreements must then be developed. When the education center opens, the courses are offered and advisory boards support their continuous improvement. New needs assessments should be conducted regularly to ensure that the curriculum being offered continues to meet employer needs.

We cannot emphasize strongly enough that the ADDIE process, on which CEC was built and continues to operate, does not represent a model that can be copied in a "cookie cutter" fashion. Rather it represents a formula whose variables must be defined by the unique needs and circumstances of the community in which the process is being used.

Two tools to assist you in using the ADDIE process are attached. The first is an Accomplishments Checklist. When using ADDIE, concrete objectives are stated in the form of accomplishments, which are ends-based outcomes (e.g., steering committee representing major stakeholders) and not process-oriented means (e.g., form a steering committee composed of major stakeholders). The checklist lays out key milestones for successfully creating the CEC experience in your community. It is critical that these accomplishments be met in each stage of the process before proceeding to the next stage. The checklist also provides some "red flags" for each of the accomplishments. Red flags are signals that accomplishments have not been achieved in an appropriate manner and serve as a method of self-assessment while using the process. The red flags included are some seen as crucial by those assisting CEC in following this process. You may recognize others that need to be added to the list. A second tool presents each of the accomplishments in a framework that allows for self-assessment and enables you and your team to develop an implementation plan and timeline to work through the ADDIE process in creating an education center.

ADDIE Accomplishments Checklist

ADDIE Stages	Accomplishments	Accomplishment Met?	Red Flags
Analyze	Steering committee composed of principle stakeholder segments including at minimum business and industry (at least 50%), public school system(s), and local technical college.		Failure to include all key stakeholders on steering committee.
	Current and future employment needs, based on interviews and surveys of area employers.		Focus on existing high school and technical college courses and programs without formal employer needs investigation by steering committee.
	Specific, tangible technical skills/knowledge and work ethic expected by employers, based on employer interviews and surveys.		Needs assessment survey asks employers about courses to be offered rather than skills, knowledge, and work ethic expected of employees.
Design	Major curriculum paths, designed specifically to meet employment needs and required technical and soft skills, identified by employers.		Perpetuation of existing vocational/technical courses without justification from needs assessment.
	Relevant courses, articulations, dual-enrollment opportunities designed specifically to meet employment needs and required technical and employability skills identified by employers.		Omission of specification for how to teach employability skills. (Merely giving a "grade" for these is insufficient treatment.)
	Appropriate personnel profiles, vital job tasks, and job descriptions.		Assumption that existing teachers will staff the school. Assumption that leadership will be a conventional school principal.
	Quality, appropriate facilities, equipment, and staffing requirements to meet identified needs.		Facilities inappropriate or inadequate to prepare for needs identified.
	Measurable goals (or charter objectives), based on clearly identified school outcomes aligned to meet established needs.		Specification of conventional measures of educational success, as opposed to performance-based measures.
	Sustainable partnership funding.		Expectation that school system will provide all or sufficient funding. Lack of investment from the business community.
	Measurable critical red flag indicators.		No benchmarks in place to monitor and correct performance.
	Assurance of organizational flexibility in curriculum, personnel and hiring practices, and finances.		Organizational flexibility issues not addressed.
	Research and data system to collect and assess results.		Lack of planning for research and evaluation of new center.
Develop	Qualified, appropriate CEO, faculty, and staff in place before school is operational.		Assumption that leadership, faculty, and staff can be hired immediately before opening.

ADDIE Stages	Accomplishments	Accomplishment Met?	Red Flags
Develop (cont.)	Appropriate governing structure in place before school is operational.		Parents too heavily represented at the expense of business on Board of Directors. Absence of true policy-making power for Board.
	Faculty has thorough understanding of school culture and operation and skills in performance-based instruction (x number of training hours).		Insufficient time spent orienting faculty and staff to the vision, culture and operation of the school. Lack of provision for extensive faculty training in the design and delivery of performance-based instruction. Poor performance of faculty during faculty training and/or overt rejection of performance-based philosophy of education.
	Relevant courses developed based on curriculum design and articulation and dual-enrollment agreements signed.		Absence of performance-based objectives for each course. (Presence of "knowledge-based" objectives.) Low level of real world simulation for courses.
	Quality, appropriate facilities and equipment in place before school is operational.		Use of traditional school facilities and technical equipment without input from business community.
	Class schedule providing common planning time for faculty and the ability to complete postsecondary certifications within one semester.		Traditional school schedule. Lack of large time block in which all faculty are free of teaching responsibilities.
	Formal agreements between school and work-based business partnerships.		Few new work-based learning settings. Lack of collaboration.
	Charter school status (*optional*).		Not granted charter.
	Sufficient enrollment acquired.		Low registration.
	Protocols, database, and data collection process to assess satisfaction and student performance.		No appropriate database or data collection instruments in place. Reliance on school system to collect data needed.
Implement	Successful delivery of quality, relevant, performance-based courses.		Instruction too "traditional"—not performance- or project- based.
	Successful completion of quality, relevant work-based learning experiences.		Lack of integration of work-based with classroom-based learning. Insufficient training of workplace supervisors.
	Program advisory board input to continuous improvement of curriculum.		Insufficient use of program advisory boards. Inappropriate representation on boards.

ADDIE Stages	Accomplishments	Accomplishment Met?	Red Flags
Implement (cont.)	Data information system with red flags and up-to-date data on satisfaction and performance.		Data not continually collected and entered into system. Red flags ignored.
	Significant professional development and collaboration opportunities for faculty.		Lack of ongoing faculty development. Lack of professional collaboration and co-teaching.
	Alumni association and contact information database in place.		Absence of post-instruction student tracking method.
Evaluate	Semester-based and annual monitoring of instructional effectiveness and relevancy of content.		Monitoring not taking place on a continual basis.
	Student performance data. *Sample indicators include:* o *Attendance.* o *On-time performance (tardies measure).* o *On-the-job performance (includes classroom and work-based learning).* o *Work ethic performance.* o *Attainment of projected standardized test scores.* o *Attainment of drop out/graduation rate objectives.* o *Attainment of postsecondary credential earning goals.*		Targets not met. *Sample targets include:* o *90% attendance.* o *90% on-time performance.* o *80% receive at least 80% for on-the-job performance.* o *90% receive at least 90% in work ethic performance.* o *100% attainment of projected standardized test scores.* o *100% attainment of drop out/graduation rate objectives.* o *100% attainment of postsecondary credential earning goals.*
	Stakeholder satisfaction data, based on surveys administered on a semester basis. *Sample indicators include:* o *Student, faculty/staff, school district, parent, and employer satisfaction.* o *Alumni satisfaction rate (with school and "marketable/work ethic" skills).*		Targets not met. *Sample targets include:* o *90% student, faculty/staff, school district, parent, and employer satisfaction.* o *95% alumni satisfaction rate.*
	Student outcomes data. *Sample indicators include:* o *Empirical evidence of graduate placement.* o *Employer/postsecondary educator satisfaction rate.*		Targets not met. *Sample targets include:* o *95% graduate placement within 90 days/100% within 120 days.* o *95% employer/postsecondary educator satisfaction rate.*
	Attainment of center goals or charter objectives.		Objectives not attained.

ADDIE Stages	Accomplishments	Accomplishment Met?	Red Flags
Evaluate (cont.)	Faculty/administration attrition data.		Target not met. *Sample target:* *5% or less faculty/administration attrition annually.*
	Enrollment data.		Target not met. *Sample target:* *90% of projected enrollment (per school, per ethnicity/gender, per total students).*
	Empirical evidence of high return on investment.		Poor returns on investment. Lack of evidence on ROI.
	Outcomes and satisfaction data reported regularly.		Infrequent compilation, analysis, and reporting of data.
	Current and future employer needs assessed regularly.		Employer needs assessment not done regularly.
	Continuous improvement system in place which uses data gathered to implement change.		Poor or little use of data gathered.

ADDIE Accomplishments Self-Assessment and Planning Tool

Accomplishments	Current Status	Red Flags Reviewed?	Proposed Next Steps	Responsible Parties/Other Stakeholders	Timeline for Next Steps
Analyze					
Steering committee composed of principle stakeholder segments including at minimum business and industry (at least 50%), public school system(s), and local technical college. *Due date:*					
Current and future employment needs, based on interviews and surveys of area employers. *Due date:*					
Specific, tangible technical skills/knowledge and work ethic expected by employers, based on employer interviews and surveys. *Due date:*					
Design					
Major curriculum paths, designed specifically to meet employment needs and required technical and soft skills, identified by employers. *Due date:*					

Accomplishments	Current Status	Red Flags Reviewed?	Proposed Next Steps	Responsible Parties/Other Stakeholders	Timeline for Next Steps
Relevant courses, articulations, dual-enrollment opportunities designed specifically to meet employment needs and required technical and soft skills identified by employers. *Due date:*					
Appropriate personnel profiles, vital job tasks, and job descriptions. *Due date:*					
Quality, appropriate facilities, equipment, and staffing requirements to meet identified needs. *Due date:*					
Measurable goals (or charter objectives), based on clearly identified school outcomes aligned to meet established needs. *Due date:*					
Sustainable partnership funding. *Due date:*					
Measurable critical red flag indicators. *Due date:*					
Assurance of organizational flexibility in curriculum, personnel and hiring practices, and finances. *Due date:*					

Accomplishments	Current Status	Red Flags Reviewed?	Proposed Next Steps	Responsible Parties/Other Stakeholders	Timeline for Next Steps
Research and data system to collect and assess results. *Due date:*					
Develop					
Qualified, appropriate CEO, faculty, and staff in place before school is operational. *Due date:*					
Appropriate governing structure in place before school is operational. *Due date:*					
Faculty has thorough understanding of school culture and operation and skills in performance-based instruction (x number of training hours). *Due date:*					
Relevant courses developed based on curriculum design and articulation and dual-enrollment agreements signed. *Due date:*					
Quality, appropriate facilities and equipment in place before school is operational. *Due date:*					

Accomplishments	Current Status	Red Flags Reviewed?	Proposed Next Steps	Responsible Parties/Other Stakeholders	Timeline for Next Steps
Class schedule providing common planning time for faculty and the ability to complete postsecondary certifications within one semester. *Due date:*					
Formal agreements between school and work-based business partnerships. *Due date:*					
Charter school status (optional). *Due date:*					
Sufficient enrollment acquired. *Due date:*					
Protocols, database, and data collection process to assess satisfaction and student performance. *Due date:*					
Implement					
Successful delivery of quality, relevant, performance-based courses. *Due date:*					
Successful completion of quality, relevant work-based learning experiences. *Due date:*					

Accomplishments	Current Status	Red Flags Reviewed?	Proposed Next Steps	Responsible Parties/Other Stakeholders	Timeline for Next Steps
Program advisory board input to continuous improvement of curriculum. *Due date:*					
Data information system with red flags and up-to-date data on satisfaction and performance. *Due date:*					
Significant professional development and collaboration opportunities for faculty. *Due date:*					
Alumni association and contact information database in place. *Due date:*					
Evaluate					
Semester-based and annual monitoring of instructional effectiveness and relevancy of content. *Due date:*					
Student performance data: o attendance o on-time performance o on-the-job performance o work ethic performance o standardized test scores o drop out/graduation rate o postsecondary credential earning *Due date:*					

Accomplishments	Current Status	Red Flags Reviewed?	Proposed Next Steps	Responsible Parties/Other Stakeholders	Timeline for Next Steps
Stakeholder satisfaction data, based on surveys administered on a semester basis: o student, faculty/staff, school district, parent, and employer satisfaction o alumni satisfaction *Due date:*					
Student outcomes data: o student placement o employer/postsecondary educator satisfaction *Due date:*					
Attainment of charter objectives. *Due date:*					
Faculty/administration attrition rate. *Due date:*					
Attainment of projected enrollment (per school, per ethnicity/gender, per total students). *Due date:*					
Empirical evidence of high return on investment. *Due date:*					
Outcomes and satisfaction data reported regularly. *Due date:*					

Accomplishments	Current Status	Red Flags Reviewed?	Proposed Next Steps	Responsible Parties/Other Stakeholders	Timeline for Next Steps
Current and future employer needs assessed regularly. *Due date:*					
Continuous improvement system in place which uses data gathered to implement change. *Due date:*					