Planning a Construction Career:

Part one of a two part series on...

How to prepare and use key-age career learning to help achieve business, technical, and professional success in the construction industry

By Ralph J. Stephenson,
P.E. Consulting Engineer

Construction is complex — This simple statement sets the stage and challenges you to develop a lifelong plan of learning for yourself and others. In construction, career decisions are often deferred or abandoned because it seems easier to go with the flow and learn your job as you progress from year to year than to plan what you want, and need, to learn.

Some construction practitioners are unwilling to continue formal learning and prefer to meet the demands of their jobs by their own self-taught processes. Others are willing to continue learning only to meet the needs of their job. Still others are willing to take continuing education and training classes to help them acquire an intellectual window into extended fields of practice. Whatever the case may be, with any given practitioner-student, the career-learning process must be planned to accommodate each specific individual. Planning is individual and essential to effective career learning and to achieving a fulfilling life in construction.

There are five critical influences on effectively acquiring knowledge for use in career planning:

1. Aspirations
2. Credentials
3. Key ages
4. Mentoring and coaching
5. Plan preparation

1. Aspirations

We should start our personal planning from some reasonably acceptable premise. For instance — *the construction business needs well educated, well trained, intelligent, reasoning, ethical, technical professionals who will continue to learn and to improve their skills long after they have left high school, college, and university.*

Let us surmise that this premise is accepted by interested parents, educators, and students in high school and college. Let us further surmise that it is accepted as a reasonable starting point from which to shape the students' early dreams — their aspirations — such as:

to design and build structures;
to be an architect;
to be an engineer;
to plan cities;
to design and construct dams and canals, to erect bridges;
to build houses, to be the president of a building company;

— Youthful wishes and hopes are essential to shaping a truly professional attitude toward construction. These dreams are usually free of the bothersome details of how to do what is aspired to. This is where career planning must start — as the dreams are starting to relate to the world in which the student will actually spend his or her life.

2. Credentials

Credentials are qualifiers and are important to a professional's career. Credentials help an employer or associate to officially evaluate what education and training the potential employee or employee has had[1]. By relating these to his or her own experiences, the employer or associate can make a reasonably reliable judgment as to the knowledge level the practitioner has achieved. This is important to making a proper selection of those that are or are not qualified to be hired, promoted, or considered for jobs requiring special skills.

Credentialed education is the formal education and the accompanying training provided in our grade schools, high schools, colleges, and universities. It is mainly a process of learning which leads to the award of a diploma or degree when successfully completed. Intensive credentialed education usually takes place from the ages of 12 to 25, and is essential to gaining entry into the professional world.

The battle over what is to be included in credentialed high school and college curriculums is an ongoing struggle. It is often intensified when education is forced to give way to training courses that are introduced into the educational curriculums. I believe that the generic construction student should be educated first and then trained. This places the responsibility for teaching and learning the principles of doing things and how to apply these principles — education — in the forefront of the learning process during the formative credentialing key ages of 12 to 25. These are the vigorous years when the mind is being shaped and the thinking and reasoning process is keenest and best able to absorb concepts.

3. Key-Ages[2]

The third item of importance in planning for a career in generic construction is the key ages of the practitioner. As we proceed through our careers we are constantly impacted by our age. Career enhancement continues in differing forms long after high school or college,

and with many people for their entire lives. The time table of career improvement is set by identifying what is best learned and applied at key ages. Improvement should result in producing the greatest individual effectiveness, personal success, satisfaction, and contribution.

My observations indicate that key ages for college or university educated people are:[3]

Age 12 to 14	Graduate from grade school
Age 16 to 18	Graduate from high school
Age 21 to 25	Graduate from college and enter the vocational field
Age 22 to 26	One year after entering the vocational field
Age 26 to 31	Five years after entering the vocational field
Age 31 to 35	Ten years after entering the vocational field
Age 36 to 40	Fifteen years after entering the vocational field
Age 46 to 50	Twenty five years after entering the vocational field
Age 56 to 60	Thirty five years after entering the vocational field
Age 61 to 65	Forty years after entering the vocational field
Age 66 to 71	Forty five years after entering the vocational field
Age 71 to 75	Fifty years after entering the vocational field

Retirement may occur anywhere between 50 and 100 or more.

Within these key ages we can formulate a game plan for ongoing career improvement. In the key-age process this is done by selecting what we feel should be learned at any given age to achieve our objectives and to improve the organization for which we work. Every individual learns differently. They differ in the age at which the learning is done, in what aspirations they have, in their personalities and capacities, in their optimum potential, and in what the goals and objectives of their employers

are. The career plan will be different for each individual and it must be able to accommodate changes in direction and in assumptions upon which the plan is built.

These differences and changes can be effectively accommodated by properly writing and regularly updating the individual's career plan of work. As a student matures, he or she may find it difficult to fully meet his or her career/time plan to everyone's satisfaction. As plans go awry practitioner-students must adjust their key-age program to provide an updated career plan by which they can still achieve their current aspirations and objectives. Here we call on one of the soundest principles in construction project management to help get through the crisis of change.

— Plan the work and then work the plan. —

A good plan will outline what it is that the practitioner-student should be taught at any given point in his or her career plan. The responsibility for this planning is primarily the student's. However often the student doesn't know what is required at various ages to achieve his or her aspirations and the organization's objectives. Then, as change occurs, there might arise doubts in the student's mind about how to accommodate and manage this change so as to stay on course — how to work the plan so it remains useful.

This suggests there is, in career-learning, a need for advisors who can discuss, assist, and guide the concerned practitioner-student in how best to plan for his or her career future, and then help work the plan through changes and disruptions so the program is successfully implemented.

Now, the fourth ingredient of our key-age career program comes into play.

4. Mentoring and coaching

Achievement of effective, planned, lifelong learning is difficult. Most failures in the effort occur because the practitioner-student does not realize what is needed for his or her learning in time to apply it properly. There exists a need for empathic, experienced counseling by those

who are willing to devote time to helping practitioner-students identify and acquire the abilities needed to advance in their careers.

These counselors are often called mentors or coaches and donate their services to guide others less well educated or less experienced than themselves to improved performance. I believe the responsibility for mentoring and coaching lies with concerned individual professionals, professional construction, engineering, and architectural societies, and the multitude of related organizations and associations that depend on the generic construction profession for their well being.

One of the first things to be done in a mentoring process is to determine a subject timetable that is intelligently related to the key-age needs of practitioner-students and their organization. At best this timetable will serve only as a guide to career learning. However it provides much needed structure to self-improvement plans.

Broad categories of construction-related subjects from which the mentor might draw include[4]—

- High school technical curricula (credentialed)
- University technical curricula (credentialed)
- Preparing for professional certification
- Alternative dispute resolution methods
- Business principles of the generic construction industry
- Business planning
- Business psychology
- Codes and ordinances
- Conflict management
- Conflict resolution
- Design and construction law
- Dispute resolution
- Effective communication
- Effective project management
- Estimating from conceptual to detailed
- Ethics and morals in a business environment
- Field inspection
- Field management principles

- Field operational techniques
- Financial management
- Management principles
- Office management principles
- Office operational techniques
- Personal skills improvement
- Planning and scheduling
- Problem solving
- Project delivery systems and their application
- Quality management
- Real estate development
- Record keeping
- Risk management
- Societal behavior
- Thinking, reasoning, and decision making
- Training
- Value engineering

Within each of these there are a multitude of sub categories of subjects needed by the practitioner-student to achieve a truly fulfilling career. The responsibility for advising what is important at various key-career points rests with the mentor or coach who has taken on the career planning assignment.

5. Preparing the plan

We now have the key ingredients of our career planning action identified — the aspirations, credentials, key-ages, and mentoring and coaching. How do we go about actually preparing a career plan? In the next *Michigan Constructor* I will present a specific example of career planning to illustrate the process. ■

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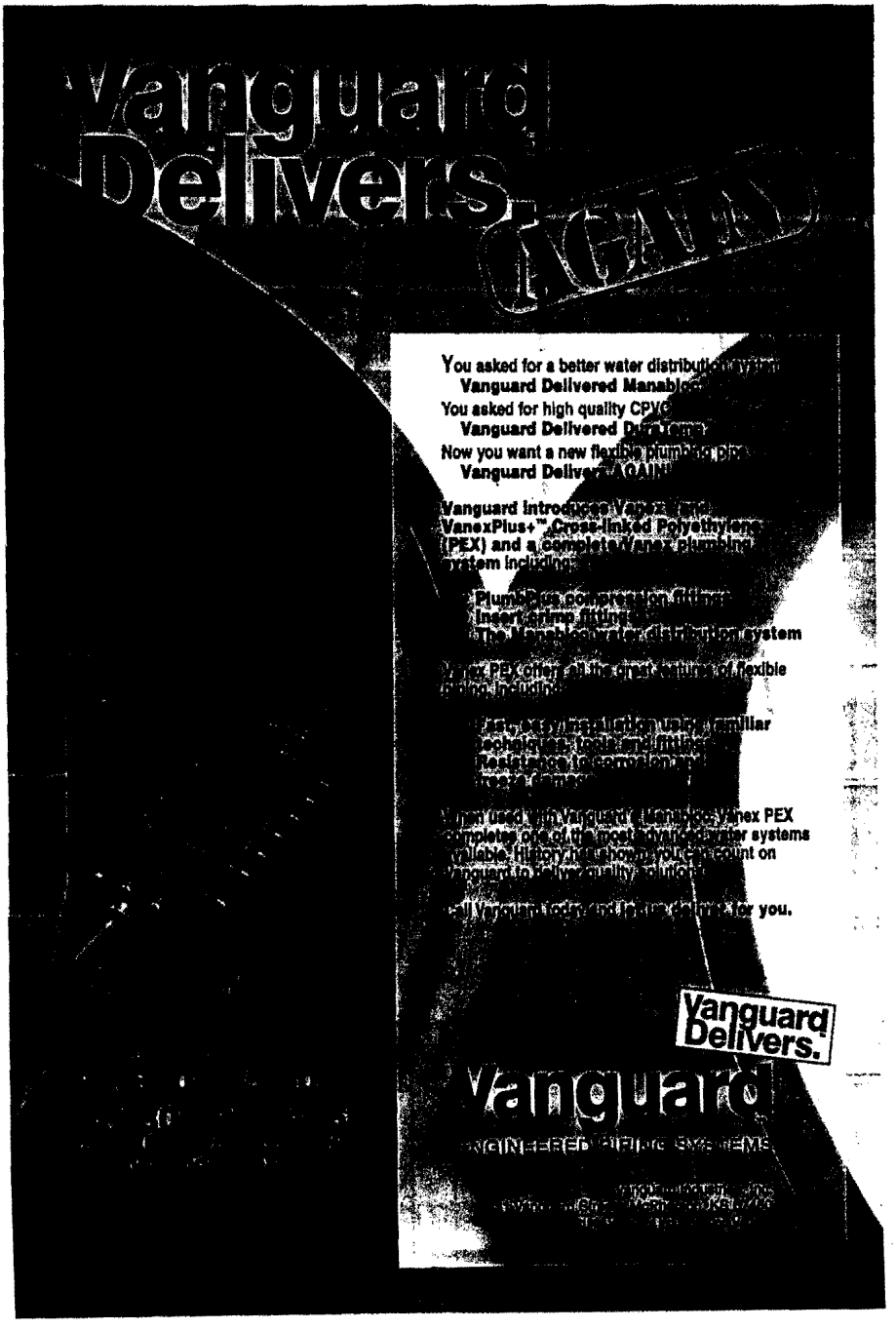
[1]Education is the teaching and learning process by which the principles of doing things are conveyed to the learner. Training is the teaching and learning process by which specific, explicit methods and systems of doing something, usually by rote, are conveyed to the learner. Teaching the principles of metallurgy is educating: teaching how to use a lathe to machine a metal part is training.

[2] Key ages are phases of our life where certain events must happen for us to move successfully to the next phase.

[3]These age groups are approximate and may vary from person to person. Similar career improvement paths can be built for those who enter the work force at different points in time than does the university or college graduate.

[4]This is a starter list distilled from a detailed list of possible continuing educational and training topics.



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Part two of a two-part series on...

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Editor's Note: In our last issue of Michigan Constructor, Ralph Stephenson identified the key ingredients of career planning. In the conclusion to this two-part series, he offers case studies to further explain the process.

5. Preparing the Plan

We now have the key ingredients of our career planning action identified — the aspirations, credentials, key-ages, and mentoring and coaching. How do we go about actually preparing a career plan? A specific example of career planning illustrates the process.

A Case Study in Key-Age Career Planning

Franciscan Construction is an old line general contractor with a reasonably progressive management. Executives and employees of Franciscan are constantly looking for ways to diversify into negotiated work while still maintaining a strong hard money bidding ability on private and public work. Franciscan is a member of the local AGC chapter. They have recently been active in developing a key-age career learning plan and are encouraging their management staff to participate in the program. Jonathan Bond, an associate in Franciscan and an experienced project manager, has volunteered for a mentoring and coaching assignment as needed. He has worked for Franciscan for the past 10 years, coming there directly upon graduation from college.

George Little is a new employee who joined the firm immediately upon graduation from a small local engineering college with a degree in civil engineering. He has shown considerable promise, and Franciscan Construction is interested in seeing that he continues his training and education.

The president of Franciscan, Austin Charbinou, has called Jonathan in for a discussion of the key-age career plan program as it might be applied to their staff. Jonathan tells Mr. Charbinou of his interest in the program, and suggests he is interested in doing some internal mentoring and coaching. Mr. Charbinou mentions that Jonathan could help by taking on the job of mentoring George using the key-age career program.

Jonathan agrees. Mr. Charbinou calls in George, outlines the plan, and George also agrees, enthusiastically, having already observed Jonathan's work methods and having seen the respect Jonathan has gained by them from the Franciscan staff.

Jonathan proposes using the five-point outline to help prepare George's key-age career plan.

Determining the detailed subjects to be included in the plan is the joint responsibility of the mentors, coaches, the practitioner-student, and the employer.

- Aspirations
- Credentials
- Key ages
- Mentoring and coaching
- Plan preparation

In conversations with George and from his own knowledge, Jonathan assembled the set of information summarized in the mentoring guide below:

Key Age Career Plan for George Little - Associate Project Engineer

Organization: Franciscan Construction Company:

Mission - Franciscan Construction Company commits its resources to provide quality and professional

services, warranting the highest degree of public confidence while maintaining a safe and friendly environment. It further commits to provide innovative construction leadership through staff education, training, and performance.

For: George Little, Associate Project Engineer - Franciscan Construction
Aspirations - to become a full project manager leading to an executive position with Franciscan in their development, design, and construction operations. Possibility of becoming manager or director of a design or development division.

Mentor: Jonathan Bond, Senior Project Manager - Franciscan Construction
Assignment - To mentor and coach George Little in developing and implementing a career learning plan.

Career Plan Outline
Rough draft for review and discussion.

(Note: George Little's career plan is to be monitored every 6 months, and is to be updated as determined by Mr. Little and his mentor.)

Age 12 Graduate from grade school - completed

Age 17 Graduate from high school - completed

Age 21 Graduate from university - completed

Current age 22 One year after entering the vocational field - completed

Suggested career-learning curriculum for five years from 22 to 27:
- Studying for and achieving professional registration. - Planning and scheduling
- Project management techniques
- Field operational techniques
- Basics of effective management
- Codes and ordinances
- Alternative dispute resolution

George Little to be mentoring and coaching at least one person.

Age 27
Suggested career-learning curriculum for five years from 27 to 32
- Advanced business planning
- Office management principles
- Field management principles
- Planning, design, and construction law
- Field operational techniques - Ethics and morals in a business environment
- Financial planning and management

George Little to be mentoring and coaching one to two people.

Age 32
Suggested career-learning curriculum for five years from 32 to 37 - Business psychology

- Advanced management methods
- Corporate law
- Capital investment principles
- Real estate development
- Design office operations

George Little to be mentoring and coaching two to four people.

Age 37

Curriculum for period from 37 to retirement to be prepared as mentoring proceeds.

The preliminary outline above is an example of how George Little and his mentor, Jonathan, have sketched out George's learning future for the next 15 years. Like any system the components can change, and what is planned today may have to revised tomorrow. However the key-age learning plan provides a solid base for decision making and an opportunity to guide George in achieving his desires. It also gives Jonathan an opportunity to help make his company better, and to learn more about the jobs that both he and George occupy. Finally, the career planning process strengthens the generic construction profession and provides an improved vital service to the public and the communities in which we live.

Who is to do the needed planning, mentoring, coaching, organizing, and teaching?

Most construction practitioners are members of an association, or other group dedicated to improvement of their vocational performance. I believe that the impetus for key-age career planning could initially come from these groups as they develop their own training and education programs. Information from the key-age career planning process would certainly help in planning such a program.

The employer will also play a major role in encouraging such career planning, particularly as it improves the performance of their employees. Naturally the confidentiality of information contained in the key-age career plan must be protected but this should be relatively easy to maintain if the counselors and mentors are conscientious and reliable.

As so often is the case, "the devil is in the details" and a career learning and mentoring program is no exception. I feel most professionals need and would welcome assistance to better structure their career development, They must be able to learn more about the specific subjects that fit their aspirations. Key-age career planning and learning can be a workable method of filling the need of those people who must do the work. ■