Session 2422

The Role of the Adult Student in the Classroom

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Abstract

Many educators frequently lump together the traditional students and the non-traditional adult students as a single entity. However, there is a very distinct difference between the traditional student and the returning non-traditional adult student. In this group atmosphere, the adult student sometimes does not fit in well with the recent high school graduate and is too easily lost or ignored.

The role of the adult student is to bring with him/her into the classroom a wealth of experience as well as a wealth of problems. These experiences can be both personal and work related. The injection of their experiences and many times their enthusiasm adds immensely to the flavor of the teaching environment as they can expand the material into new examples and applications. He/she can add to your repertoire a dimension that you may not have thought of. Educators, who do not recognize the multiple benefits brought in by the adult student, can lose many of those assets.

Some of the problems of the adult student are not unlike those which the traditional or younger student faces; some however are very unique and are definitely more demanding. An example of the additional difficulty experienced by the adult student would be the need to provide for a family and at the same time gain an education. The determination of the adult student to find time to study and complete homework while achieving equal or higher grades is not lost on the traditional student.

The adult students that we have been involved with typically have more incentive to learn. They bring a maturity and focus of purpose to the classroom. They understand the importance and the necessity of the educational process both from a work related benefit and from a personal improvement benefit. This focus makes an impression on the more traditional student, particularly as they work in teams. Here, the adult student becomes a teacher of the traditional student, and frequently a teacher of the instructor.

Observations and conversations that we have had through the years with adult students will demonstrate the influence that the adult student can have.

Introduction

The difference between the returning adult (RA) and the recent high school graduate (RHS) can be illustrated by use of the stimulus-response (S-R) formula¹. The S-R formula is most effective when applied to simple tasks or to situations in which there is little additional input to the stimulus that feeds into the final response. The RHS generally has little experience through which to filter a particular stimulus. Therefore the response is narrowly defined by the stimulus. However, a RA generally has acquired an array of direct and indirect experiences. Therefore, the same stimulus will interact with some experience and modify that stimulus which then may result in a very different response.

These experiences (maturity) can be positive or negative. They can be positive in that they provide a larger number of viewpoints through which to view the situation. They can be negative in that they can narrow the viewing window. The accumulated experiences tend to close the mind to new concepts. If the experience has been to do something a particular way, the tendency will be to force every situation into that same method rather than considering something new.

The assignment of students into teams presents an arena in which many of the interactions between the RHS and the RA are more visible and development of the team is enhanced. Both positive development and non-development or degradation of the performance of the team can be observed.

Communication

Lab Team "A" approached the lab assignment as a cooperative endeavor. The three-member team was composed of an older RA with supervisory work experience, a RHS and a younger RA. They cooperatively discussed how to conduct the experiment and how the data was to be collected. They selected a function for each member, making sure that the function was fully understood and then followed up to ensure each member accomplished that task in time to incorporate it into the final report. The older RA understood the necessity of timely communication and helped with the time management.

Lab team "B" was composed of four members, all middle-aged and working. One was a college graduate in a non-engineering position, one a machinist, one a welder (with very little self-confidence) and other a factory laborer. The data collection process was not coordinated and the data sheets were not very well organized. The welder and the factory laborer were slower to pick up the course material. Two members essentially picked the parts they wanted to do and left the rest for the other two. There was little coordination or cross discussion concerning how parts of the report were to be assembled. One member collected the various parts of the report, assembled them in sequence and made minor adjustments before turning it in for grading. There was minimal team communication concerning the finished report.

Leadership

In team A, the older adult with supervisory experience picked up the challenge and, in a very collaborative manner, led the team in accomplishing its responsibilities. Due to his calm efforts, the

"Proceedings of the 2001 American Society for Engineering Education Annual Conference & Exposition Copyright © 2001, American Society for Engineering Education" team was very serious about learning. There was no question of any one freeloading. All of the members understood what each was doing and how it tied into the final report.

No one on Team B picked up the team leader role. The team divided and it turned into the college graduate and machinist vs. the welder and the factory laborer. In order to obtain as good a grade as possible, the college graduate did most of the number crunching. The machinist collected the various sections of the report, combined them, and wrote most of the final report. There was very little effort to help each other learn the material and no one chose to be the team leader. Although all four were RAs, this was a dysfunctional team.

Ethics

Adult students who are working can more easily relate to ethical issues, can sense the interpersonal issues involved and can sort out the responsibility lines. Typically, these students enter college five to fifteen years later than the traditional students, work full time in industry, and invest five to ten years earning an A.S. degree. For instance, they pick up well on the career implications of most ethical dilemmas. They bring to the classroom an appreciation for the pressures in the industrial world and the methods used to cope with them. The younger students, in general, try to follow a typical textbook approach in their course of action, and then come up with a solution, which, although correct in theory, sometimes would not go over well in a real world situation².

Adult students who work, or have worked, in large companies see their protection in following orders (i.e. the company ethics policy). They see themselves as a number rather than as an individual when solving ethical problems. A "don't rock the boat" attitude was often times prevalent with these students.

On the other hand, adult students who work in smaller companies often see themselves as part of a "family unit", weathering together the storms of business (material shortages, schedule delays, natural disasters, ethical dilemmas, etc.) In their analysis of problems, they tend to turn to their relations with the family to help them sort out the ethical gray areas.

In some cases, the role of the adult student would be to "smooth out" the waters and in other cases to show the younger students the consequences of their actions and how to think things out in a calm manner. Hence the adult student's perspectives of work issues and ethical issues are usually different from those of the younger or traditional student, but perhaps this can provide insight and a broader overview.

Motivation

The adult student's motivation comes from within, either a specific goal or a strong desire to learn while the traditional student's motivation comes from without (i.e. the parents). A higher sense of motivation also comes from the adult student's maturity and work experiences. This can be passed on to the traditional students. This can also be compared to a push-pull situation. The adult student being the pusher, while the younger traditional counterpart being the puller.

Since these non-traditional adult students are working full time while pursuing their academic work, they really put in a full day's work. Classes at the Columbus campus typically start at 4:30 pm or at 6:00 pm with the laboratories scheduled from 7:30 pm to 10:00 pm. A student who is taking two technology courses and working full time would leave work in time for a 4:30 pm class and finish up after 10:00 pm twice a week, on either Monday and Wednesday or on Tuesday and Thursday. Hence, the motivation factor plays a vital role in their studies and attitudes.

For the adult student, motivation can come in one of two ways:

• The goal-oriented student uses the educational process for accomplishing fairly clear-cut objectives. These individuals usually did not make any real start on their education until their middle twenties and sometimes later. Perhaps they have been passed over for a promotion or they wish to better themselves within the corporate structure. They choose jobs and make other decisions in life, in terms of the potential for growth that the job can offer, always applying for a better position when it comes available.

Adult students who take our classes are employees who want to move up in the organization. One fellow who was passed over for a team leader position asked his management what he needed to do to get a promotion. The answer was "Start taking classes in your field".

Another situation, which just recently occurred at Cummins Engine Company had to do with a series of recent layoffs. A middle-aged female who was let go, asked her supervisor why she was among the chosen few even though her past reviews were good. The answer: "You don't have a degree". Now if that doesn't give you motivation, nothing will.

• The learning-oriented student seeks knowledge for it's own sake. Most learning-oriented students have been engrossed in learning for as long as they can remember. For the most part, they are avid readers and have been since childhood. They join groups and classes and organizations for educational reasons; they select the serious programs on television and radio; when they do something, they always make a production out of it.

Experience

To paraphrase a popular commercial for a credit card company:

Ethics		\$20.00
Leadership		\$70.00
Communication	n	\$50.00
Motivation		\$60.00
Experience		PRICELESS

"Proceedings of the 2001 American Society for Engineering Education Annual Conference & Exposition Copyright © 2001, American Society for Engineering Education" The adult student has a great wealth of experience to bring to the classroom that can add immensely to the flavor and authenticity of the teaching environment. Workplace experience "brings home" the pressures of salary and career growth. The adult student's experiences count for as much as the teacher's knowledge. As an example, there was an instance when I was explaining a piece of electronic equipment in the laboratory, only to have some students explain that they have more modern equipment at their workplace. This encouraged me to update my knowledge base on that type of equipment.

Another student, who had a background in hydraulics, liked to relate the learning of the flow of electrons, i.e. current, with the flow of hydraulic fluid down a series of pipes, check valves, diverters, and pressure sensors. As he described his interpretation of the analogy, he became the teacher of the other students and a role model for the class. Hopefully, his outside industrial analogies will transform into a motivating factor for these students who are on the edge of grasping the subject and not sure where it is going. As he wormed his way through the various analogies, the traditional students listened, some in awe, and some just in interest.

The experience of the adult student also comes into play when organizing teams for a lab project. We have seen earlier that it is usually the adult student who has had experience working in a team environment that takes charge and puts the team together.

Conclusion

The contribution of the returning adult can be very positive. The individual reactions depend upon many intangible experiences. The adult students that work in cooperative environments tend to form good relations and produce good results. The returning adult is much more willing to produce the effort necessary to learn the material. He/she has a much clearer view of the value of the education. When that experience and enthusiasm can be harnessed and directed to help the recent high school graduate, the benefits can be enormous.

In conclusion, an outside testimonial for adult students was recently made by another colleague at Purdue University: "Experienced folks like Linda really help our younger students appreciate what happens out there beyond this somewhat special environment. I'm thrilled when we have people like her here. They really do a lot more than they sometimes think"³.

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