

## Piagetian and Neo-Piagetian Principles in the Workplace

When discussing training and e-learning in the workplace a starting point is that the learners are usually adults. However, the word adult can be misleading. The workplace is full of a variety of age groups including teens, trainees, and older adults. But, for the purposes of this paper, the focus on learning solutions will be mainly for older adult employees based on some of the principles of Piagetian and Neo-Piagetian Theories.

In designing and implementing learning approaches for adult learners in the workplace, following the ideas of Piaget's theory, an instructional designer must consider that like a child, adult students need internal motivation rather than memorization. They must make connections between what they know and what they are learning. Relating information to what they already know and being able to reflect on that information is imperative for any learner and the adult learner is no different. The learner will be more likely to remain engaged if the material is presented in a way that they can relate to.

Piaget's idea that a learner cannot integrate certain knowledge until the student is cognitively ready can also apply to adults. An instructional designer should take into account an individual adult students' cognitive development when designing and implementing learning approaches. In designing and implementing learning approaches for older adult learners the designer must take into account the inner motivation of the learner, especially when the learner has a personal investment in the material. It is vital to recognize the importance of this internal motivation to learning to be able to alter the instructional approach from memorization to an emphasis on making connections between known information (schema)

and new information. It is the designer's responsibility to help make a connection between the student and the material being taught. An older student will most likely be sufficiently cognitively developed to take on the information provided. As this student is developed, the material should be introduced in a developed, professional manner.

Teaching these developed students can be a difficult task. It can be hard to recognize what motivates the students and to keep them engaged. However, there are three Piagetian/Neo-Piagetian principles that can be used to teach learning in the workplace.

The first principle that can have an impact in the workplace is learning through hand-on experience. According to Neo-Piagetians "children and adolescents can learn a great deal through hands-on experiences (Ormrod, 2012, p. 307). ELearning can be an effective tool for teaching employees a number of things but the best way to gain experience with almost any process or procedure is to actually perform it. Working with the actual concrete materials in the physical world can help employees tie what they've learning from the eLearning modules. This can be an effective form of learning no matter what the age of the learner.

A second principle that can impact the workplace is inquiry learning. Inquiry learning "typically has the goal of helping students acquire more effective reasoning processes either instead of or in addition to acquiring new information "(Ormrod, 2012, p.308). The following is an example of how this goal can be accomplished.

Students are presented with the intellectual confrontation of how to design an evacuation plan that meets a company's safety requirements. Students would hypothesize the aspects of the company's current plan and possible scenarios associated with it. As a newly

assigned member of the Occupational Health and Safety team, the student will be working closely with experts who will help them in their research to better understand the successful components of an evacuation plan.

Students conduct this research by engaging in multimedia training modules which allow them to change different areas of the plan such as designating primary & secondary exits, labeling stairways, and determining assembly areas. By focusing and comparing the current evacuation plan, students should be able to draw on their prior knowledge, which helps them to connect their new knowledge to their existing schema. Cause and effect relationships of the plan can provide a concrete model from which students can observe patterns and generalize theoretical results to a newly formed plan. From these observations, students draw conclusions about what aspects of the current plan works and they are able to observe large themes such as the many conditions that play a role in a good evacuation plan. Once students have generalized needed conditions of what is needed for to create a good evacuation plan, they can conduct further research in off-line activities in the OH&S Department.

These off-line activities will engage students in explorations that guide them in discovery learning. For example, after gaining an understanding of the differences in the types of risks associated with evacuation routes they can hypothesize the consequences for each route taken and develop experiments to test alternative means of exit. These structured experiments can act as live simulations from which the learner can discover which route poses the least amount of risk and make conclusions about which routes would be most effective.

Once students have a complete understanding of all the aspects of an effective escape route then are ready to address the original confrontation of how to design an evacuation plan. Students will then be able to engage in a multimedia activity in which they hypothesize various combinations of conditions and test this hypothesis to see if it results will work.

The last principle that can be instrumental in the workplace is interactions with peers. Neo-Piagetians believe that interaction with peers helps children realize that others often view the world very differently than they do and that their own ideas aren't always completely logical or accurate. However, the same can be said about adults.

The workplace is full on opportunities in which employees are required to interact with numerous employees especially in larger organizations. These collaborations usually involve people with various opinions with different level of expertise. It is during these collaborations where adults are able to gain a deeper understanding from their peers who have more experience and knowledge with the subject matter. The peers act as teachers that cause employees to reevaluate their current perspectives on the subject matter (Ormrod 2012).

### References

Ormrod, J. (2012). Human Learning (6<sup>th</sup> ed.). Boston, MA: Pearson