

# Professional teaching standards for graduate teachers education essay



It is impossible to deny the fact that today's students are different from any generation before them. Information and Communication Technology (ICT) has revolutionised society and is an integral part of our lives. Today's students are the digital generation, the first to grow up with ICT and not know of life without it. Judging by the phenomenal growth and utilisation over the last two decades, ICT is almost certain to dominate our future. As educators, it is a paramount issue to think about how to teach now, ready for the future.

Marc Prensky (2001) observes that today's students have changed radically. They think and process information fundamentally differently because of the ubiquitous technological environment and their interaction with it. They are used to receiving information really quickly and have a diet of dynamic visual stimulation.

That being said, human beings are still human beings and the methods by which we learn are still consistent with the educational theories of yesteryear. It is a very worthwhile exercise to think about how to incorporate ICT into pedagogical practices. It makes sense as ICT is integral in the language and culture of students today. It is also beneficial to consider how ICTs can support teaching and learning itself. The internet has moved far from the stage of being static and primarily used to transmit and broadcast knowledge. Dynamic, interactive and collaborative features are now at the educator's disposal.

Behaviourism is a simplistic learning theory. It is based on observable behaviours acquired by environmental stimuli. ICT that are designed with the

behaviourist approach include quizzes and interactive games. Use of positive and negative reinforcement is valuable and effective. Students receive instant feedback and it is a form of motivation. Usually however, the knowledge that one obtains from these designs, is largely factual. Students are engaged but according to the revised Bloom's taxonomy by Anderson and Krathwohl (2001), the knowledge is limited to the lower order thinking processes of remembering and understanding information.

The virtues of problem solving, decision making, creative thinking, critical thinking and meta-cognition are achieved by building on the lower skills. These higher order processes are valuable to the student as they learn how to think, not what to think.

Cognitivism is a learning theory differing from behaviourism. It takes the human mind into account. Learning is constructive, not merely receptive, as humans are rational who require active participation to learn. Information is received, processed and the individual creates new knowledge and meaning for themselves.

Implications for teaching in the classroom will include incorporating hands-on activities and opportunities for practice and application. ICT can contribute in this area with the use of computer simulations. One such example are the open-source learning objects that enable students to perform virtual experiments. By entering different parameters and conditions, students test their own hypotheses and construct their own understanding. It can be argued that this ability should not detract from actual physical

experimentation. However, in the cases where field work is not always possible or permitted by time, simulations are the next best thing.

Stemming from cognitivism is constructivism. Constructivism is a well accepted educational theory that recognises that knowledge is constructed as a function of the individual. Therefore, knowledge will be subjective and varies with prior knowledge from cultural and individual experiences. Lev Vygotsky, an influential educational psychologist, put forward a socio-cultural theory of constructivism. He suggested that individuals learn through social interactions, their culture and language.

Social interaction, learning from each other, collaboration and co-construction of knowledge is therefore of much value. It is in this area, that ICTs, especially social software technologies, are capable of efficiently facilitating constructivist learning. Social softwares include online chats, podcasts, wikis and blogs.

Online Chats and Forums engage individuals through social interaction and negotiation. In the classroom, teachers can use these tools to draw out interest, experience and previous knowledge of a subject. There are advantages for online discussions over traditional face-to-face ones. There is equal opportunity for all to contribute and the discussion is not directed by the extroverts. The discussion is not limited by space and time because the discussion is hosted online and can be asynchronous.

The use of podcasts in the classroom is an effective pedagogical strategy for social negotiation. Podkids Australia is an apt example that demonstrates great use of technology. Students at Orange Grove Primary School negotiate <https://assignbuster.com/professional-teaching-standards-for-graduate-teachers-education-essay/>

and decide what to broadcast, they sequence the content and articulate it into a concise audio format and post them on the internet. They share what they have learnt and disseminate their knowledge to others well beyond their classroom. The level of transparency is expected to foster positive school-community relationships.

Wikis are online editable content. Innovations have enabled students to use wikis in the classroom as complicated scripting is no longer required. Students can gather and synthesise information from secondary sources, including the wealth of knowledge that is readily available on the internet. As with any information source, the student learns how to exercise scrutiny and interrogation to determine whether the information is reliable and current. Synthesis of information includes organisation, analysis and application into a new entity. Students, usually working in groups for these research activities learn to allocate tasks and then negotiate a suitable presentation for their own wiki page. They utilise procedural knowledge as they will need to master the operations of the wiki software, albeit simple as it is. Students can see each other's work, which is not a common practice in traditional classrooms. Struggling students can learn from the more able students. This kind of social interaction is what Vygotsky points out as being vital for learning.

Students can edit each other's contribution leading the way for formation and acceptance of constructive feedback. The final product is an impressive collaborative body of work, that can be far superior to that of individuals combined as because students will contribute different ideas and these will stimulate others' thoughts down diverse paths.

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If one was to categorise the thinking processes involved in a wiki exercise in the taxonomy for learning teaching and assessing, it is obvious that higher order cognition can be achieved.

The use of blogging is a creative experience. Everyone can be an author with blogs. This online journaling is popular and enables individuals to display self identity and personal interpretations of events. The individual has a great sense of ownership and their review of past experiences, reflection, and tracking of progress and growth over time paves the way for meta-cognitive knowledge or knowledge of self and how one learns.

Behaviourism, Cognitivism and Constructivism are learning theories that can be supported by ICT. By understanding the affordances of ICT, educators can appropriately select which tool is best suited for their purposes. The affordances of ICT are impressive and utilisation of dynamic, interactive and collaboration features can be of much value in promoting learning.

## **References**

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