

Developing fully rounded individuals



To prepare students to meet the societal needs of the 21st century, colleges and universities must transform their educational practices to intentionally develop the 'whole person' within their cohorts, argues **Robert J Thompson Jr**, Professor of Psychology at Duke University

Higher education has the challenge of preparing students for life-long learning, leadership, and service in the knowledge-based economy and pluralistic, globally interconnected world of the 21st century. As Dean of Trinity College of Arts and Sciences and Vice Provost for Undergraduate Education at Duke University, I have come to view the major challenge as meeting society's needs for civic minded individuals. This means those who have the intellectual and personal capabilities to

go beyond tolerance and constructively engage political, ethnic and religious differences, as well as work effectively and live together with many different kinds of people in a more global society. To prepare students to meet these societal needs, I have argued¹ that colleges and universities must transform both their educational goals and practices to provide a formative education and be guided in this process by advances in our understanding of learning and human development.

Beyond cognitive skills

Developing the skills of reasoning, critical thinking, problem solving and effective oral and written communication have been long-standing goals of higher education. These goals are no less important in the 21st century. While necessary, however, these traditional educational goals are not sufficient. From my perspective as a paediatric psychologist, the ability to constructively engage difference also requires the development of an interrelated set of cognitive and personal capabilities: a personal epistemology (see below) that reflects a sophisticated understanding of knowledge; empathy and the capacity to understand the mental states of others; and an integrated identity that includes values, commitments and a sense of agency for civic and social responsibility.

What is 'personal epistemology'?

This refers to a person's belief about the nature and justification of knowledge. There is a developmental progression in the sophistication of thinking about knowledge from absolute facts to multiple and relative opinions to evaluative judgments in which knowledge is regarded as continuously evolving and coordinated with justification². Personal epistemology is interrelated with other dimensions of development including identity and social relationships and involves the intertwining of cognitive (how do I know?), intrapersonal (who am I?), and interpersonal (what kind of relationships do I want?) dimensions³. An understanding of knowledge as socially constructed through engagement with others is essential to the complex ways of meaning-making associated with moving from dependence on authority to self-authorship.

Higher education aims to transform students' ways of thinking, knowing and understanding to assure that students function at the evaluative level. However, the evidence indicates that the majority of undergraduates predominately function as 'multiplist', in that knowledge is equated with personal opinion and the commitment to tolerance is equated with non-discrimination among competing claims².

'At the heart of the evaluativist epistemological position is the view that reasoned argument is worthwhile and the most productive path to knowledge and informed understanding, as well as to resolution of human conflict.'² To foster the development of evaluativist thinking, colleges and universities must provide the types of educational experiences that enable students to engage in the processes of inquiry and reasoned argument and discover for themselves that these processes are empowering and useful for problem solving, discerning among competing claims, and resolving conflicts.

Learning

Advances in our understanding about learning have gone through three phases over the course of the 20th century with corresponding implications for instructional practices⁴. Early in the last century, learning was viewed as response acquisition, a relatively automatic strengthening or weakening of responses through environmental feedback, and instructional practices involved drill and practice exercises. By the end of the century, learning was viewed as knowledge construction involving the processes of, 'selecting relevant information and interpreting it through one's existing knowledge.'⁴ Learning was understood as best accomplished through discovery, guided by mentoring, rather than passive receipt of transmitted knowledge. Instruction was increasingly characterised by an emphasis on active, student-centred, experiential learning.

Developmental science perspective

The study of human development has evolved from reductionist nature or nurture approaches and mind-body dualism to an integrated biopsychosocial systems approach that emphasises relations among different levels of organisation, from the biological to the socio-cultural and historical⁵. Development is now understood as a dynamic process that occurs as a function of the transactions of the individual with her/his social environment. The transactions involve systems ranging from the biological (eg genes and cell physiology) through the psychological (eg cognitive processes) to the cultural (eg societal expectations). The developmental system is characterised by the three-way potential for change: within the person; within the environment; and within the person/environment transaction. This developmental systems perspective has particular implications for undergraduate education. It calls attention to the marked changes in the development and integration of higher order capacities that characterise the transition from childhood to adulthood.

Emerging adulthood

The recognition of the increasing length of the transition from childhood to adulthood in our post-industrial society has led to a proposed new phase of development, 'emerging adulthood'⁶. This spans the period from adolescence to young adulthood, or roughly the ages of 18-25. Occurring after the dependency of childhood and adolescence, but before the responsibilities of adulthood, emerging adulthood is the period of life that offers the most opportunities for explorations of possible life directions; and of commitments in the areas of love, education, work and worldview. Emerging adults subjectively

experience this phase of life as distinct. They no longer see themselves as adolescents but do not yet see themselves as adults, particularly with regard to indicators of self-sufficiency, including accepting responsibility for themselves, making independent decisions, and becoming financially independent.

Neurocognitive development

Emerging adulthood is not only a subjective state, it is also a period marked by changes in physical, cognitive and emotional development, and self-consciousness. Neurocognitive development continues as the brain goes through a remodelling process. The development of the prefrontal cortex underlies changes in executive functions (the capacities involved in control and coordination of thoughts and behaviours, decision-making, and problem solving); social cognitions (both self-awareness and perspective taking, ie the ability to understand others' minds and infer mental states such as intentions, beliefs, and desires); and self-regulation (the ability to control one's attention, emotions and behaviour). There are also changes in the dopaminergic system, which plays an important role in the brain's reward circuitry⁷. Dopaminergic activity in the prefrontal cortex is higher during early adolescence than at any other point in development. Systems involved in reward processing mature early in adolescence but there is a gradual development and strengthening of brain systems involving self-regulation and the coordination of emotion and cognition over the course of adolescence and early adulthood. This combination of an easily aroused reward system and a still immature self-regulatory system in middle adolescence has been likened to 'starting an engine without yet having a skilled driver'⁸.

Developmental tasks

The foremost task is the process of identity formation, essentially a theme of self-authorship: coming to know who you are, what you believe in and value, to whom and to what you want to commit, and what you want to accomplish and get out of life. One must come to terms with new potentialities for thinking, feeling and acting and rearrange one's self-image accordingly. Mature autonomy is manifested through openness to change and to growth and a willingness to push oneself, not frenetically, but purposefully, to develop intellectually and personally.

Another task is to develop the capacity for intimacy, which refers to experiencing a sense of mutual openness, responsiveness, and closeness in friendships and relationships. Intimacy complements autonomy in terms of being able 'to experience others' needs and concerns as equally important as one's own'⁹. This capacity for intimacy is essential for success with the challenges of marriage and parenthood that, along with establishing a career, are among the major markers of adulthood in modern society.

A developmental model of education

To be responsive to societal challenges and to the advances in our understanding of human development, colleges and universities must promote the development of higher order cognitive capabilities and foster the accomplishment of developmental tasks. In short, a more intentional and integrative developmental approach to education is required.

There is no single developmental model but rather a way of thinking about education that draws on various theories and empirical evidence regarding progressive changes in cognitive, affective, and interpersonal functioning that characterise the late adolescent and emerging adulthood periods in modern society. More specifically, a developmental model provides an integrating framework that focuses attention on the role of educational practices in fostering the development of these essential capacities and makes clear that the task of promoting cognitive and personal development is the common task that unites faculty and staff as educators.

A developmental model also makes clear that the goal of higher education is to transform students' ways of thinking, knowing, and understanding. We seek for all graduates to function at the evaluativist level, which is necessary to move beyond tolerance of differences and realise the benefits of our diverse talents and perspectives through constructively engaging differences and resolving conflicts. These transformations link development of the necessary higher order mental capabilities with identity formation that is the central task of adolescence and emerging adulthood. In particular, experiential pedagogies, such as service learning courses that combine community service with classroom experience, 'have strong potentials to unite elements too long separated in the academy: thinking and feeling, reflection and action, theory and practice'¹⁰.

Why academic advising is important

A developmental model also makes clear the importance of academic advising, counselling, and academic support services in the common mission of promoting cognitive and personal growth. Academic advising involves providing guidance to students in formulating their career plans and course of studies, including choice of major and sequence of specific courses and experiential learning components such as study abroad and internships, and necessary preparation for professional school (eg medicine, law, business) or graduate school. In some colleges and universities, academic advising is provided by trained staff, whereas in others, it is a responsibility of the faculty within each discipline/department. Framed through the perspective of a developmental model, academic advising is fundamentally a teaching process that is accomplished in the context of a caring, affirming relationship. The goals are for students to feel valued

and connected to the institution; to promote openness and self-reflection, accurate self-appraisals of strengths and weaknesses, and strategic help-seeking when necessary; and to be empowered to engage the resources of the college or university for intellectual and personal development. Academic support services involve an array of resources that enable students to succeed with their course of studies, ranging from tutoring in specific subjects to writing centres to time management, stress management, and study skills development programmes. Also included are specific supports and accommodations for students with learning disabilities. It is important to understand that academic support services are not based on a 'deficit model' that is, services to remediate students' deficiencies, but rather as strategic resources that all students can call on to develop the skills they need to be successful.

The need for counselling services

Counselling services involve support and treatment services for an array of student concerns ranging from adjustment problems, to identity and relationship issues, to mental health problems. The contribution of counselling services to both academic success and personal development has been well established. For example, a recent report documents the impact of counselling on academic outcomes, including retention, students doing better with their academic work, enhancing their overall experience of being at university or college, and developing skills useful for obtaining employment, as well as personal development including increased ability to cope, improved self-confidence and increasing their hope for the future¹¹.

Finally, a developmental model provides a basis for an integrated and holistic assessment plan that goes beyond an appraisal of student learning to include multiple dimensions of student development. Such an assessment plan must contain strategies and methods to gauge the impact of pedagogical, curricular, advising and counselling initiatives that are aimed at these developmental objectives. The information once gathered

needs to be analysed through a collective process that involves relevant faculty and staff in identifying opportunities for improvements in educational practices.

The whole aim of higher education

Higher education must transform its educational practices and adopt a developmental model of undergraduate education as a process of cognitive and personal growth, involving empathy as well as reasoning, values as well as knowledge, and identity as well as competencies. Adopting a developmental model serves as an integrating framework for the college or university that unites the efforts of faculty and staff across the academic, advising, and counselling services of the college and university in the common mission of empowering students for a life of meaning and purpose. It makes intentional that the aim is for students to discover that they have developed their own unique personal style; that they have something to say in their own way; that they are responsible for what they say and do; that they are worthy of self-respect and the respect of others; and ultimately to realise their own humanity as a creative, empathetic, and committed person.

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Beyond Reason and Tolerance, The Purpose and Practice of Higher Education, by Robert J Thompson Jr, provides a developmental science basis to inform necessary transformations in undergraduate educational practice. It argues that emerging adulthood is an especially dynamic time of reorganisation and development of the brain that both influences, and is influenced by, the undergraduate experience and it synthesizes advances in our understanding of human development and learning. The book has direct implications for undergraduate education practices.

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