

# Humanistic Value Development Through Extracurricular Activities in Anatomical Education

## Desarrollo de Valores Humanísticos a Través de Actividades Extracurriculares en Educación Anatómica

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**SUMMARY:** Human Anatomy is the first medical specialization course for students of clinical medicine and cultivates the virtues of medical students, helping them to establish the humanitarian values. Therefore, integrating humanistic values education into the course of human anatomy is crucial. In anatomy courses for clinical students, online previews, group-based clinical problem-based learning, and theoretical lectures are used in anatomical education which is integrated with extracurricular activities for the education of human values, such as classical medical stories, group-based humanistic value cultivation, a memorial ceremony for "silent mentors", the morphological drawing and basic experimental skills competitions, and public welfare activities. After a year of implementation and investigation analysis, it was shown that students had a higher willingness to participate in the curriculum activities in this blended learning system, and these activities could stimulate students' interest in learning, which is beneficial to the cultivation of professional and humanistic values.

**KEY WORDS:** Human anatomy; Human value cultivation; Blended learning; Extracurricular activities.

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## INTRODUCTION

The medical model has undergone a gradual transition from a bio-medical model to a bio-psycho-social model since the 1970s (Alonso, 2004). As treating the physical disorders of patients, the psychological and social needs of these patients should be of the utmost importance in order to promote physical health (Mayer *et al.*, 2017). The guidance opinions issued by the State Council of the People's Republic of China in 2020 regarding the acceleration of innovative development in medical education suggested that medical education should emphasize the development of students with a commitment to saving lives and aiding the injured, in addition to fostering benevolence and medical expertise. Furthermore, the guidance opinions suggested that medical education should strengthen the instruction of research integrity and humanistic values (Wang, 2021). Incorporating the development of humanistic values into medical courses for the education of medical students is thus essential. Medical students are introduced to cadavers (donated corpses) as their "first patients" in anatomy courses (Guo *et al.*, 2020). As a foundational discipline in medical education,

the anatomy course can provide a first step on the educational path of humanistic value (Hildebrandt, 2019). Therefore, this presents a chance to incorporate humanistic value education and the promotion of humane practices into the anatomy course with the blended learning.

In our school of medicine, we used blended learning methodologies to teach and study human anatomy. This approach combined the advantages of in-person instruction with online learning. The course has three distinct modules, including the online preview prior to classroom instruction, case-based learning, and cadaver-based education. To foster students' humanistic mindset, additional learning materials are incorporated into the three learning components (Fig. 1). These include incorporating medical classic stories into online previews, implementing humanistic values cultivation in the group-based clinical problem-based learning, organizing a memorial ceremony for "silent mentors" at the start of theoretical lectures, organizing a morphological drawing and basic experimental skills competitions during

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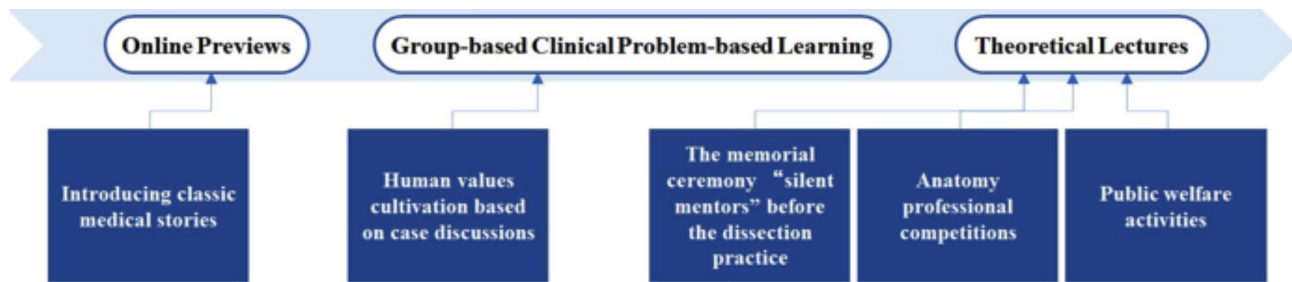


Fig. 1. Extracurricular activities are incorporated in the blended human anatomy education.

anatomy operations, and public welfare activities. Through the cultivation of humanistic values based on the blended learning, medical students develop a deep respect for their "silent mentors" by treating them with caution, thus preparing themselves for the cultivation of humanistic values. The whole process strives to cultivate students' gratitude and sense of responsibility while cultivating students' dialectical thinking, clinical thinking, and scientific thinking to promote students' solid foundation, physical and mental health, and comprehensive development.

## MATERIAL AND METHOD

**Participants.** The subjects of this study are clinical major students (grade 2020) who have completed the course of human anatomy. Through a questionnaire survey, students' willingness, feelings and influences on the activities for the cultivation of humanistic values were collected. A total of 182 questionnaires were collected.

**Introducing classic medical stories.** Human anatomy is a typical morphological curriculum, and it is difficult to maintain enduring interest by simple descriptive teaching for students (Klement *et al.*, 2011). Taking into account the rich historical heritage of the subject, relying on the narratives of historical figures to teach professional knowledge can not only increase the interest, but also achieve the edification of moral and spiritual values. The online leaning preview was kicked off with the classic oath %the Hippocratic Oath swearing%in ceremony, which announced the commandments in the field of medicine. The solemn oath not only starts the students' reverence for medicine and life, but also plants the seeds of humanistic values. Classic medical literature related to the history of anatomy development was explored to preview online leaning, such as Da Vinci's anatomy atlas of the human body, Harvey's theory of blood circulation, the formation and development of the great book "De hominis corporis fabrica" by Vesalius. These reinforced students' comprehension of medical knowledge, and learn the critical and innovative spirit from the stories of predecessors.

**Humanistic values cultivation based on case discussions.** The case-based leaning involved the selection of authentic clinical cases, and students were tasked with conducting situational deduction in a collaborative group setting. Their objective was to independently analyze, diagnose, and elaborate upon the cases while being guided by the instructors. Through active interaction with the patient in this particular situation, students develop essential competencies such as critical thinking and medical professional literacy. This method of immersive instruction not only significantly promotes students' interest in learning, but also fosters humanistic values and facilitates the comprehension and application of professional knowledge. Furthermore, by means of this process's comprehensive infiltration of professional quality education, medical students are able to developing awareness of the medical profession and acquire the skills necessary to communicate effectively with patients and uphold humanistic values.

**The memorial ceremony "silent mentors" before the dissection practice.** The "silent mentors" appreciation ceremony serves as a prelude to the human anatomy dissection practice course. First, through the use of multimedia demonstrations, online and offline examples, and participant dictations, the concept and significance of organ donation were elucidated. Through attentively listening to the narratives of body donors and their families, one can gain insight into the donors' anticipations regarding the capacity of students to assume the onus of preventing fatalities and injuries. The second proposal is to coordinate a profound homage for medical students to the "silent mentors" prior to the practice, with the intention of enhancing their appreciation and respect for life.

**The morphological drawing and basic experimental skills competitions to enhance the humanistic qualities of students.** In order to encourage students to investigate the aesthetic value of the human body, the Department of Anatomy proactively coordinated anatomy morphological drawing and anatomy experimental skills competitions.

These events not only consolidated fundamental knowledge but also fostered students' imagination and creativity by fusing medical expertise with aesthetic appeal. Moreover, they assisted students in developing an accurate aesthetic concept.

**Promotion of humanistic values through public welfare activities.** With the institutionalization of body donation and the improvement of public recognition of body donation, our department, in collaboration with the Wuhan Red Cross and student associations, organized medical students to participate in the body donation ceremony, Wuhan's memorial day of body donors, and the commemorative activities of the "silent mentors" human library. Participating in the exercises allowed students to feel the "silent mentors" sincerity and altruism, increase their respect for life, and better understand the professional mission of medical practice to save lives and heal wounds. Furthermore, experts and professors lead and organize students to travel to surrounding cities and towns to conduct medical knowledge popularization and health consultation activities with local medical institutions and public welfare organizations in street communities and schools at all levels, in order to foster students' humanistic values.

## RESULTS

**Students have a high level of willingness to participate in these activities.** Prior to their implementation, we conducted a survey to gather students' expectations regarding these activities (Fig. 2). According to the survey results shown in Figure 2, 43.41 % of students would actively participate in the teaching process of introducing medical classic stories in class, with 40.66 % would participate if they had time. During the ceremony for "silent mentors", 65.93 % of students actively participated, while 30.77 % expressed interest in participating later. For case-based learning, 71.98 % of students would actively participate, with 22.53 % participating when they had time. 36.81 % of students would actively engage in the morphological drawing and basic experimental skills competitions, the anatomy and histology drawing competition, and the embryo, with 35.16 % participating when they had time. 50.00 % of students actively participate in community-organized public welfare events, such as the Wuhan Red Cross's memorial service for body donors. 39.01 % of students participate when they have time. According to the data shown above, the majority of students are willing to participate in humanistic value learning activities during their human anatomy course.

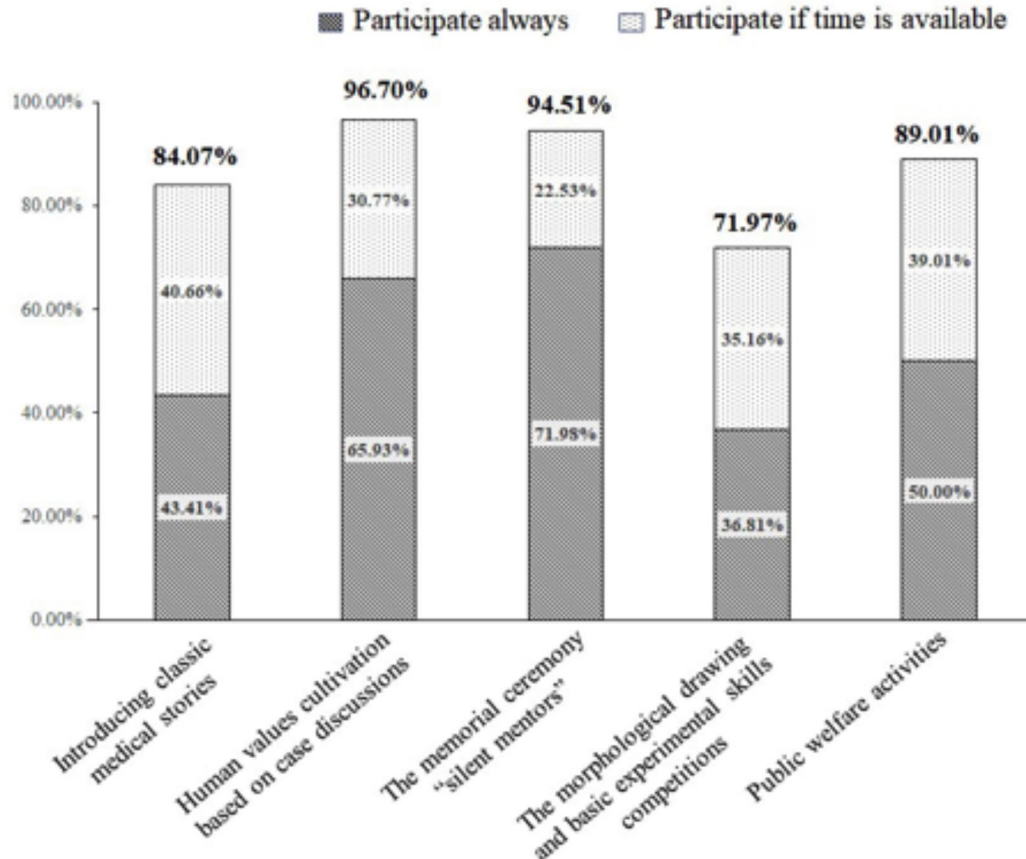


Fig. 2. The willingness to participate in these activities.

**After the activity, students awarded a higher rating to these activities.** After one semester of implementation, we surveyed students' feedback on these activities. For introducing classic medical stories, 97.80 % of students said like, 2.20 % did not like; conducted case-based discussions, 89.56 % like, 10.44 % didn't like; paid tribute to " silent mentors", 95.06 % said like and only 4.95 % dislike; the morphological drawing and basic experimental skills competitions, 81.87 % liked, 18.13 % disliked; community-organized public welfare activities, 86.81 % liked and 13.19 % didn't (Table 1). This indicates that the activities in the course can be acknowledged by the student and meet the student's learning needs.

**Impact of these activities on student learning.** Analyzing the impact of activities in the course on student learning, the results showed that 90.66 % (165) of students felt that increased interest in the study of the course in anatomy of the human body was beneficial; 90.66 % (165) felt that the mastery of specialized knowledge was helpful; 84,07 % felt that it was conducive to learning cutting-edge knowledge in medicine; 97,25 % (177) felt it was helpful to cultivate the

medical spirit of "honoring life, saving from death, relieving wounds, being dedicated, loving borders"; 95,06 % (173) thought it could help to foster the consciousness of "respect for patients, good communication, and dealing with major issues according to the law," and 96,15 % (175) felt it helped to establish a career goal of "putting the safety and health of the people first" (Fig. 3).

## DISCUSSION

By integrating the cultivation of human values into the human anatomy blended leaning system, adhering to the philosophy and objectives of medical education, concluding the instruction of professional knowledge while fostering the noble qualities of students, and enhancing human literacy. It has been determined, through student feedback, that the model serves not only to facilitate the acquisition of human anatomical knowledge, but also to enhance students' moral character and comprehension of human literature. The medical education emphasizes the integration of " learning " and "performing", From a cognitive standpoint, the implementation of practical performing is critical (Fair *et al.*, 2023).

Table I. Students' feelings on humanistic value education.

	Dislike very much	Dislike	Like	Like very much
Introducing classic medical stories	1 (0.55 %)	3 (1.65 %)	33 (18.13 %)	145 (79.67 %)
Case-based discussions	2 (1.10 %)	17 (9.34 %)	56 (30.77 %)	107 (58.79 %)
The memorial ceremony for "silent mentors"	1 (0.55 %)	8 (4.40 %)	25 (13.74 %)	148 (81.32 %)
Basic experimental skills competitions	3 (1.65 %)	30 (16.48 %)	26 (14.29 %)	123 (67.58 %)
Public welfare activities	2 (1.10 %)	22 (12.09 %)	28 (15.38 %)	130 (71.43 %)

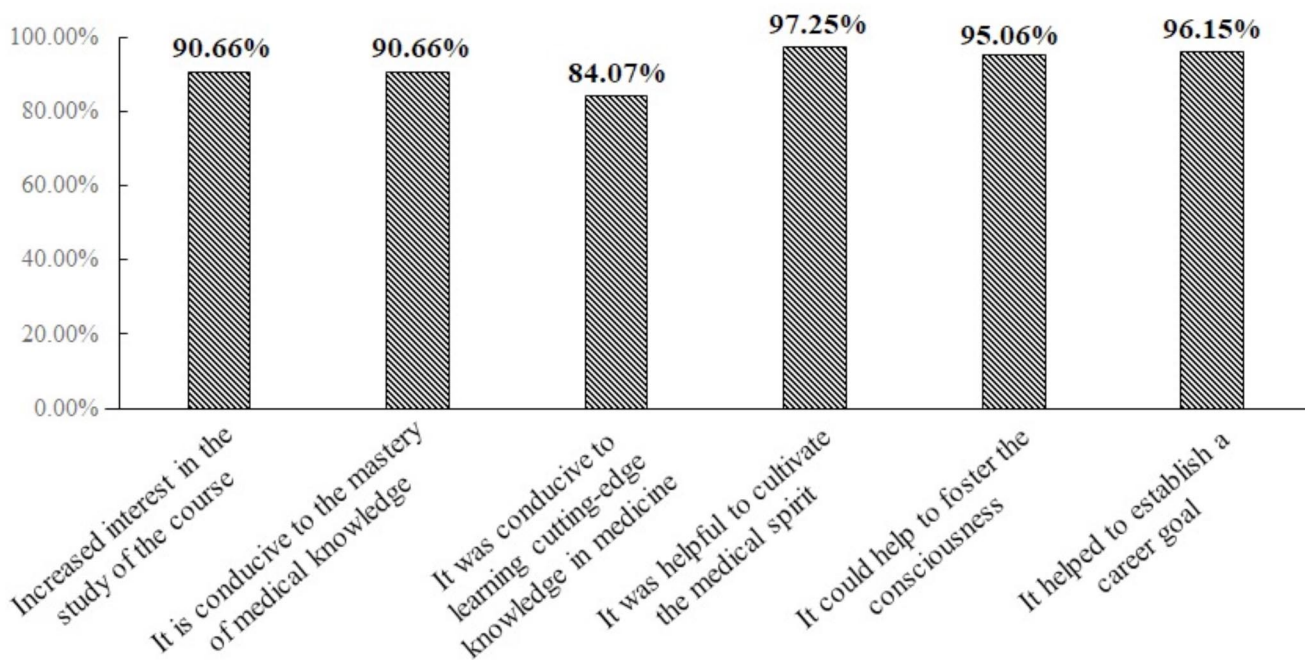


Fig. 3. The effects of humanistic value education.

In our teaching practice, on the one hand, we strengthen the depth of "knowledge" through the enrichment of classroom forms. On the other hand, students are organized to consciously and spontaneously deepen their awareness of the humanitarian values of medicine and gain a deeper understanding of the importance of medical humane care. Many institutions have carried out activities to pay tribute to "silent mentors", which has achieved good feedback on the effectiveness of human values education (Kumar Ghosh & Kumar, 2019; Souza *et al.*, 2020). On this basis, we are also in contact with the school's affiliated hospital to establish teaching a "second class", where students can feel the love of the medical workers in real life and the physical effort to cultivate vocational literacy. With the rapid development of medicine, medical students must understand the frontier knowledge of medicine (Briganti & Le Moine, 2020). We have established a "third classroom" in cooperation with the research team, aiming to enhance students' understanding of scientific research and ignite their enthusiasm for it. The public also needs to understand the values of medical humanism (Wang, 2021). We are trying to extend related activities to other specialties students, guide non-medical students to understand medicine, understand the pain and hope related to disease, get to know the medical industry, and convey the idea of life-valuing and caring.

The main objective of out-of-class activities is to increase the number of "performing" activities. Students' associations play a leading role in carrying out medical knowledge and humanitarian education-related practical activities, public-benefit activities, and various competitions. Enhanced communication with government agencies and public welfare organizations, and regular visits are arranged for students to visit communities or nursing homes for compassionate and clinical counseling activities. Collaboration with the Wuhan Red Cross to conduct follow-up visits for the families of body donors, collaborate with affiliated hospitals to conduct medical counseling activities for society, and generate innovative ideas that can benefit the medical community are all part of the program.

Human anatomy is the initial course that clinical professional medical students take; developing an appropriate and expeditious instructional framework serves as the blueprint for this phase (Swinnerton *et al.*, 2017). Integrating education in human values with vocational excellence, gratitude, and life education as the overview; the human anatomy blended learning systems are consistently investigating the professional course model of our institution. Medical students strive to intertwine with the original knowledge network, soften silence, and ultimately attain a high level of integration between human value education and professional education.

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**HE, L.; ZHU, C.; LEI, Y.; HU, C.; PAN, Q.; TANG, Y.; TIAN, Y. & ZHENG, Y.** Desarrollo de valores humanísticos a través de actividades extracurriculares en educación anatómica. *Int. J. Morphol.*, 42(4):1119-1124, 2024.

**RESUMEN:** Anatomía Humana es el primer curso de especialización médica para estudiantes de medicina clínica y cultiva las virtudes de los estudiantes de medicina, ayudándolos a establecer los valores humanitarios. Por lo tanto, es crucial integrar la educación en valores humanísticos en el curso de anatomía humana. En los cursos de anatomía para estudiantes clínicos se utilizan avances en línea, aprendizaje grupal basado en problemas clínicos y conferencias teóricas en la educación anatómica que se integra con actividades extracurriculares para la educación de los valores humanos, como historias médicas clásicas, humanísticas grupales, cultivo de valores, una ceremonia en memoria de los "mentores silenciosos", concursos de dibujo morfológico y habilidades experimentales básicas, y actividades de bienestar público. Después de un año de implementación y análisis de investigación, se demostró que los estudiantes tenían una mayor disposición a participar en las actividades curriculares en este sistema de aprendizaje combinado, y estas actividades podrían estimular el interés de los estudiantes en el aprendizaje, lo que es beneficioso para el cultivo de habilidades profesionales y valores humanistas.

**PALABRAS CLAVE:** Anatomía humana; Cultivo del valor humano; Inclinación mixta; Actividades extracurriculares.

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