

REVEALING “TUT WURI HANDAYANI” - A STUDENT-CENTRED LEARNING APPROACH - BY KI HAJAR DEWANTARA FROM THE EARLY 20TH CENTURY: A LITERATURE REVIEW

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ABSTRACT

Background: Student-centred learning is characterized by constructive, collaborative and contextual learning; derived from the constructivism theory. We studied the principle of “*Tut Wuri Handayani*” / TWH (to follow the learners to achieve their utmost potentials) which was initiated in 1922 by Dewantara, who was the first Ministry of Education, Republic of Indonesia.

Method: A qualitative method with ‘content-analysis’ was used to study the articles written by Dewantara published in Indonesian newspapers between 1920-1960. We reflected the articles into current evidences of student-centred learning principles. Validations were done through three times focus group discussions (FGDs) by 30 students of a master’s of health professional education program and in-depth interview with two national experts in higher education.

Results: In the period of early 20th century, Dewantara’s ideas had arrived at ‘contextual’ and ‘collaborative’ principles; the basis of current philosophy of student-centred learning. Dewantara’s exceptional initiatives were: (1) emphasizing equity between learners and teachers regardless the strong hierarchical social culture among Indonesian, (2) making the best use of cultural events and instruments as rigorous learning resources to enhance the sensory abilities and social sensitivity of the students towards community’s needs, (3) promoting observation-based learning to promote self-directed learning by helping the students to reflect on their mistakes, to be independent thinkers and to be responsible persons, to minimize gaps between attitudes and behaviours, and to provide role models and opportunities for students to actively participate in learning.

Conclusion: “*Tut Wuri Handayani*” or ‘to follow the learners to achieve their utmost potentials’ revealed as a student-centred learning principle emphasizes life-long learning. Dewantara may be regarded as one of the world-wide leaders in education.

Keywords: student-centred learning, learning theories, self-directed learning, facilitating learning, constructivism

ABSTRAK

Latar belakang: ‘Metode belajar berpusat pada mahasiswa’ merupakan suatu pola pembelajaran berbasis teori konstruktivisme yang bercirikan pembelajaran konstruktif, kolaboratif, dan kontekstual. Prinsip “*Tut Wuri Handayani*” (TWH) merupakan prinsip yang dicanangkan oleh Ki Hajar Dewantara pada tahun 1922; yang merupakan Menteri Pendidikan pertama Republik Indonesia, yang artinya: “Guru mengikuti (memfasilitasi) pembelajar untuk mewujudkan potensi tertinggi mereka.”

Metode: Penelitian ini merupakan penelitian kualitatif dengan menggunakan content analysis dengan cara mempelajari artikel-artikel yang ditulis oleh Ki Hajar Dewantara yang diterbitkan pada beberapa harian di Indonesia antara tahun 1920-1960. Artikel-artikel tersebut direfleksikan dengan bukti-bukti ilmiah terkini

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terkait prinsip-prinsip pembelajaran berpusat pada mahasiswa/ *student-centred learning*. Validasi dilaksanakan dengan melakukan 3 kali diskusi kelompok terpusat/ FGD yang diikuti oleh 30 mahasiswa program S2 Ilmu Pendidikan Kedokteran dan Kesehatan dan wawancara mendalam dengan 2 ahli pendidikan tinggi di tingkat nasional.

Hasil: Pada awal abad ke-20, Ki Hajar Dewantara memiliki ide-ide yang telah memuat prinsip kontekstual dan kolaboratif, yang merupakan dasar dari filosofi *student-centred learning* yang terjadi di masa kini. Ki Hajar Dewantara memiliki terobosan yang luar biasa, diantaranya: (1) menekankan kesetaraan antara pembelajar dan pendidik meskipun di budaya Indonesia yang memiliki hierarki sosial-budaya yang kuat, (2) memanfaatkan kegiatan dan kebudayaan yang telah ada sebagai media ajar yang kuat untuk meningkatkan kepekaan sosial pelajar terhadap kebutuhan masyarakat, (3) memperkenalkan metode belajar berbasis observasi untuk meningkatkan kemandirian belajar dengan membantu pembelajar untuk merefleksikan kesalahan mereka, menjadi pemikir yang independen, menjadi seseorang yang bertanggung jawab, mengurangi perbedaan antara sikap dan perilaku, menjadi teladan/ panutan dan memberikan kesempatan bagi pembelajar agar berpartisipasi aktif dalam proses pembelajaran.

Kesimpulan: "Tut Wuri Handayani", ternyata merupakan suatu prinsip pembelajaran berpusat pada mahasiswa/*student-centred learning* yang menekankan pada pembelajaran sepanjang hayat. Ki Hajar Dewantara dapat disebut sebagai salah satu pemimpin dan pembaharu di bidang pendidikan di tingkat dunia.

Kata kunci: *student-centred learning, learning theory, self-directed learning, facilitating learning, constructivism*

INTRODUCTION

Current learning approach in the 21st century was moving from teacher-centered into a more student-centred learning (SCL) and lately transforming the students into agents of change.¹ Students are encouraged to actively searching information using appropriate critical thinking skills and decide their own learning goals which furthermore explored with a more collaborative-community learning strategies.^{2,3} Moreover students are encouraged to discover evidences and lead it into better actions for the people. Therefore, teachers' role is mainly to facilitate students' learning on a constructive basis and provide constructive feedback that stimulates deep reflection, based on experiences.^{4,6} A more students' friendly assessment with so-called 'continuous observation' from many views and reviewers is emphasized. Learning should therefore more meaningful with contextual problems presented at early education and gradually more complex in line with knowledge and skills gained gradually by students.^{7,8}

Among series of learning theories of behaviourists, cognitivism and constructivism; the latest is the basis of student-centred learning.⁹⁻¹¹ One of Indonesian

leading teacher was Ki Hadjar Dewantara who wrote many articles that seized a more student-centered principle when it was still in early 20th century.¹²⁻¹⁴ This paper reviewed literatures on learning theories, furthermore presenting Ki Hadjar Dewantara's work and reflected his work into the current student-centred learning principles.

Review of theories underlying student-centred learning principles

The early on theory of learning was 'behaviourism' who views that the change of external behaviour originated from series of repetitions of desired action and immediate corrected mistakes without proper reflection and thinking.⁹ Therefore, a teacher may take the dominant role in a class and having control of students' behaviour.^{15,16}

Different than 'behaviourists', 'cognitivists' emphasize more on thinking, in which information received, organized, stored, and retrieved. Someone may modify their behaviour and not only controlled by external factors such as a teacher.⁹⁻¹¹ Piaget as one of 'cognitivists' has popular terms of four stages in child's development: starting from sensory-motoric phase at

the early life which is focusing on the development of the five senses, to operational phases consisting of understanding language and logical thinking. Finally, there is a formal operational stage at the later years, when a young adult may understand both logical and abstract thinking.⁹ Lev Vigotsky added some relational connection between learning process and socio-environment. He called his principles "Guided Participation" and encourages teachers to do scaffolding to help the learners learn step-by-step as a process of their learning to be independent.¹⁷

A 'behaviourist' uses feedback (reinforcement) to modify behaviour in a desired direction, while 'cognitivist' make use of feedback (knowledge of results) to guide and support accurate rational connections.¹⁸ In 'constructivism', teachers should help the learner to understand that the world is actually their world. The learner 'creates the meaning' of experiences instead of only 'accepting' it. Therefore, the role of a teacher is more to help the learners to construct some experiences into meaningful reasons. These learning processes require constructive feedback abilities from teachers and peers, also high level of meta-cognition and reflection skills from the learners. At this point, "constructive, contextual, collaborative" learning are fundamental keys for current life-long self-directed learning.^{6,8} These three keys were well-established from principles of Brown and Duguid¹⁹: activity (practice), concept (knowledge), and culture (context). 'Instructions' in constructivism is to help the learners to create meanings from experiences. Therefore, to create instructional design in such a way that helping learners to construct their experiences, requires skilful knowledge by teachers. Level of learning gained by learners is proven to be at the highest learning curve if using constructivism theory of learning.⁹ David Kolb with his experiential learning theory is one of constructivists.⁴ Kolb's learning theory sets out four distinct learning styles in which 'immediate or concrete experiences' provide a basis for 'observations and reflections'. Experiential learning requires students to reflect and learn from experiences in order to be better in the future.

Ronald Harden,⁷ in the area of medical education proposed the SPICES concept in early 80's emphasizing student-centred learning, problem-based

learning, integrative learning, community-based learning, electives, and systematic or spiral-based learning that based on the 'constructivism' principle. This concept is moving from the traditional concept of Flexner in 1911 which was more teacher and hospital-centred.

Review of Dewantara's initiatives on a more student-centred education

Dewantara was an Indonesian young leader who was exiled from his people by the Dutch colonial in 1910s, because of his political movement towards Indonesian independence. However, in The Netherlands, he obtained an opportunity to continue a study on a diploma of teaching and inspired by Froebel as principle of "Kinderen-garten" or the garden of children.²⁰ After returning to Indonesia, there were exceptional initiatives of Dewantara who started to believe that better education may transform his people to a better future. Dewantara in 1922 developed many schools called Taman Siswa; which original meaning is similar to 'the garden of students' and became the first Minister of Education Republic of Indonesia in '50s, few years after Indonesian independence. Today, many Taman Siswa schools remain active as well as the original office of Taman Siswa in Yogyakarta city, Indonesia.

"Tut Wuri Handayani" ('to follow the learners to achieve their utmost potentials); which has been the formal motto of the current Indonesian Ministry of Education and Culture of Indonesia, was adapted from the symbol of Taman-Siswa. It comes from the words of "Tut Wuri" or 'to follow' and "Handayani" or help to maximize potentials,¹²⁻¹⁴ meaning that the teachers should help and facilitate their students as if they are flowers who about to bloom.

Few studies had tried to understand the role of Taman Siswa in early 20th century.²¹⁻²⁴ All of them had explored the movement of Indonesian young leaders towards independence of Indonesia, especially Dewantara. Only few of them had touched the detail concepts of Dewantara's of student-centred learning. Among the few, McVey²¹ had successfully made known Dewantara's ideas including his underlying thoughts of "Tut Wuri Handayani" that is the teachers' main responsibility to observed and provide guidance to

the students. Although McVey also pointed out that in Taman-Siswa schools, students and teachers were working together for the learning process, he did not explain the detail work of Dewantara as the basis of his student-centred learning principle.

To study Dewantara’s outstanding initiatives towards a life-long self-directed learning approach is highly important. Recently, Parmi¹⁴ had studied the “*Tut Wuri Handayani*”/TWH (to follow the learners to achieve their utmost potentials) in her unpublished dissertation. However, many more deserved to know the work by Ki Hajar Dewantara, who apprehended the idea of student-centred learning since the beginning of the 20th century. According to our knowledge, this study is the first original research paper of revealing “*Tut Wuri Handayani*”/TWH approaching student-centred learning principle.

Concerning the context of this study which was in Indonesia, one of Asian countries, it seems that ‘behaviourism’ learning approach may still currently work for Asian. Asian responds directly on a command from someone who is perceived at the higher hierarchy, including teachers.²⁵ The culturally hierarchical context in Asia has placed the teachers’ position higher than their students.²⁶⁻²⁹ This socio-cultural contextual phenomenon is closely related to the results of this study.

METHODS

We studied articles written by Dewantara during 1920-1960 collected by Tauchid and colleagues¹²⁻¹³ in 1962 consist of 556 pages. The total articles were 108, from newspapers, speeches, and radios’ interviews. Some of them were published in both Bahasa Indonesia and Dutch. The author qualitatively coded and reflected into current evidences in teaching and learning theories by two individual coders; one was the author and the second was an anthropologist.

To validate the findings, we did three focus group discussions (FGDs) with three groups of total 30 graduate students of a master of health professions education program. There was not any term of TWH (to follow the learners to achieve their utmost potentials) in all modules and written resources of the particular master program during this study were

conducted. We asked one question: “What do you think about TWH principles? The rule of the one hour FGDs was a free-association of TWH related with terminologies in medical education. The results were listed and ranked based on frequency.

Furthermore, we interviewed two national experts in higher education to validate the final findings. The experts were familiar with Dewantara’s inheritance articles. One was the chairman of the education and research centre of the oldest university in Indonesia and the other was the previous head of Taman Siswa in mid ’90 who was one of direct pupils of Dewantara in the past. The particular university was the one who awarded a ‘doctor honoris causa’ to Dewantara, by the first rector, in mid ’50. We asked the experts whether they agree with our findings and their additional comments.

All qualitative data were transcribed within 48 hours and analysed by ‘content-analysis’.^{30,31}

RESULTS AND DISCUSSION

“*Tut Wuri Handayani*” was interpreted as empowering students by following students development of learning process with careful observations and feedback, nurturing and guide them to comprehend the better meaning of the world. Therefore, it is a student-centred learning principle to facilitate life-long self-directed learning. We found three exceptional ideas of Dewantara that may contribute to the student-centred learning approach: (1) equity between teachers and students, which may promote two-way dialog of self-assessment, reflection, feedback and action plan regardless the strong socio-cultural hierarchy of Indonesian, (2) make the best use of local cultural events and instruments as rigorous learning resources, which may promote sensitivity towards others’ needs, contextual learning, and meaningful learning as well as collaborative learning, and (3) promoting self-directed learning by helping the students to learn from mistakes, with extra careful observation and guidance like a caregiver do, which may promote independent thinking and responsibility, adequate role-model and providing adequate learning opportunities for students to participate in their learning process and therefore learning is fun.

Ideas on equity between learners and teachers

The idea of equity principles between learners and teachers become very special to be articulated in the period of 1920s, in Indonesian context, because it has been (until today) a deep-rooted hierarchical social system with inequity between people as the strongest consequence.²⁶ The way Dewantara changed his original name of Raden Mas (English: ‘Sir’) Suwardi Suryaningrat in purpose to cover his higher social status of the royal family of Kadipaten Pakualaman Yogyakarta, was already a truthful prove of his message. He clearly mentioned that he did

not want to make a distinction between him and his people. “Ki” in Javanese means lay person who may provide any help, like “Ki Juru Martani” (the helper of the farmers). Dewantara also stated that he did not want his doctoral title to be mentioned in his books which compiled all of his articles. Citations of Dewantara’s words which contained initiatives towards equity in education are shown in Table 1.

Ideas on learning meaningfully by using local learning resources and culture

The second distinguished idea of Dewantara was

Table 1. Quotation of “Articles by Dewantara” emphasizing equity in education in a culturally hierarchical context of Indonesia

Quotation	Resource
“Education is only guidance. It means that they way the children are growing are beyond educators’ control and determination.”	Wasita” 2nd Edition, Augustus 1930 ¹⁹
“Beginning from 18 year of age, we have to give exceptional trust to the young adults, avoid authoritarian rules and replace it with fully stimulating trust, by still doing the “Tut Wuri Andayani” (let the learners lead and we step back so they may to achieve their utmost potentials). The elder should be more understanding towards the younger and the children.”	
“There is no such of authoritarian in education because we, the teachers; like the caregivers who take care (Javanese: “Panggulawenthah”) of a baby by being present, providing warmth, guidance, close observations (Javanese: “Among-Momong-Ngemong”).”	
“The Among method is caring towards children’s development based on their basic individual characteristics.	
“A child should never be forced to do anything, he has his own will and determination and he should be independent based on his own thinking and abilities.”	

making the best use of cultural events and instruments as rigorous learning resources for the students (Table 2). He was not only emphasize the importance of learning from reality, but also the more contextual learning and collaborative learning; the two basics of student-centred learning. He was also aware of the levels of students before choosing different kind of contextual learning resources. He used Javanese traditional songs and dances to stimulate the five senses (listening abilities and observation abilities) for small children under 7 years old. He used the same cultural instruments to train the elder children

to be able to play the “Gamelan” or Javanese musical instruments in a harmonise collaboration. He used many Javanese traditional children-games to stimulate physical activities for the elder children. Dewantara also emphasised on ‘live-in’ together such as in a boarding school, to provide possible opportunity for the students to regard their friends and teachers as their second family.

Starting from writing the ‘learning from real live’ principles, Dewantara articles were continued into ‘arts and cultural’ sections. Even the publisher

Table 2. Quotation of “Articles by Dewantara” emphasizing making the best use of cultural events and instruments as rigorous learning resources to promote contextual and collaborative learning

Quotation	Resource
“It is important for the students to get closer to the lay people to know their daily living habits; and therefore the students should experience it by themselves.”	A brochure of “ Taman Indriya the first kindergarten in Indonesia ” 1959 ¹⁹
“For children under 7 years old, it is important to help their five senses to develop well. We have many traditional music, dances, songs, fable, and the Wayang stories, to help our children to also to reflect on the basics of professional behaviour.”	
“Children under 7 years old have their natural instincts. We should help them to require proper reflection on the basic of etiquettes and professionalism by using traditional games to play with; like what I already wrote: <i>from Nature to Culture</i> .”	
“Children like to play games. Playing games is one of ways to help the students to learn many subjects including etiquettes and professionalism (Javanese: “Budi Pekerti”).”	“ Taman Siswa Principles ” presented by Dewantara during the opening of Taman Siswa Schools July 3 rd 1922 ¹⁹
“A school should be a home for the teachers and so here come their students from nearby and faraway places. The ‘home’ can also be perceived as a direction to follow.”	

decided to have the ‘cultural section’ into a separate book because he wrote breadth and depth things about culture, in which he explained that culture is the foundation as well as a result of a proper education. We may also found about art and culture, etiquettes and professionalism, since the beginning of his first book to the end.

Ideas on promoting self-directed learning

Learning from mistakes by constructive feedback and

reflection, are one of elemental principles of student-centred learning principles which were emphasized in current literatures of medical education. In mid 20th century Dewantara had mentioned the importance to help students to learn from their mistakes by adequate observations like a caregiver do (Table 3).

The “among method” explained by Dewantara was one of basic principles of providing close

Table 3. Quotation of “Articles by Dewantara” emphasizing ‘observation-based facilitating learning’ to promote self directed learning.

Quotation	Resource
“Most of educational programs are usually implemented by a routine tradition, without proper awareness and reflection (Javanese: “Keinsyafan”) on what is going on. If there was awareness, it should not only be based on feelings but also on adequate evidences. Experience alone is not enough if we did not reflect and learn from it.	“ Keluarga ” Year 1, No 1,2,3,4 Nov-Dec 1936 and Jan-Feb 1937 ¹⁹
“Ways to help the students learn are: (1) providing role-models, (2) providing adequate opportunity to practices, (3) instructional design to learn based on the most recent evidences, (4) self-discipline, or structured routines and (5) experiences and reflect on experiences.”	

<p>"What we use as instruments to educate our children is the widest care and the maximum attention to observe the children physically and mentally to grow and to develop based on their nature and their yearning. We called this the "Among-method" of facilitating learning.</p>	<p>"Taman Siswa Principles" presented by Dewantara during the opening of Taman Siswa Schools July 3rd 1922¹⁹</p>
<p>"Without having a dependent relationship with the students, the teachers should not ask for something, but to give their maximum attention to the students and to be their greatest caregivers."</p>	
<p>"We are (the teachers) learning together with the students, although we provide guidance, we follow the students in an equal participation. By using "Tut Wuri Andayani" principle, we help the students to reflect on their mistakes."</p>	
<p>"The risks of having mistakes should be consciously understood properly by the students. The teachers should not punish them improperly, but should help them with passion and love like parents do to their children."</p>	<p>"Wasita" 1st edition No 8, May 1929¹⁹</p>

observations and guidance. He specifically referred to a terminology of a caregiver who taking cares of a child with extra careful and extra observations. However, Dewantara also mentioned that after a child reach their 18 years old, we should still do the nurturing manner - but in a distance, because it is their time to live their future life. Dewantara had underlined the educational philosophy by summarizing educational principles of student-centred learning, which the family and psychological philosophy of social education in a family were also embedded (Table 4). By deep analysing the etiquettes and professionalism and by exploring the centre role of a family, based on Indonesian cultural characteristics, Dewantara had empowered parents and the family, to help their children and to help each member of the family to be independent thinkers and responsible persons, to minimize gaps between attitude and behaviour, to provide role models and many opportunities for everybody to be able to actively participated in their own learning process of life.

Dewantara established different level of Taman Siswa schools for specific groups of age: Taman Indriya for children under 7 years old, Taman Siswa for elementary schools, Taman Madya for junior high schools, Taman Dewasa for high schools, Taman Wiyata for higher education, and Taman Guru for teaching schools. He also empowered women and farmers to actively participating in education and daily life by establishing special courses for female: Women of Taman Siswa and special courses for farmers: Taman Tani.

Other significant findings from articles by Dewantara were that he referred to many international references and many international experts in education, psychology, as well as religious leaders. The "budi pekerti" or the Indonesian value of professionalism to build a stronger nation-character; which he was revealed, was based on many international literatures on professionalism (Table 4).

Among the experts and leaders in education, Froebel, Tagore and Montessori^{20,32,33} had the most

Table 4. Quotation of "Articles by Dewantara" summarizing educational philosophy that seized the general professionalism principles.

Quotation	Resource
<p>"Education is guidance to grow and to develop by optimizing the utmost potentials of a child to be a human being, part of his/her society, to reach the maximum safety and happiness."</p>	<p>"Keluarga" (a "Family" Newspaper) Year 1, No 1,2,3,4 Nov-Dec 1936 and Jan-Feb 1937</p>

“The aim of education is to promote a nation to be equal to other nations to cooperate and collaborate together in the shake of mankind wellness.”	“ Wasita ” 2 nd Edition, Augustus 1930
“Everyone is a teacher and every house is a school.”	“ Keluarga ” (a “Family” Newspaper) Year 1 No 2, December 1936
“In a family, firstly parents provide guidance and role-models. Secondly, the children may teach each other and finally the children may teach themselves. Etiquettes and professionalism are firstly nurtured in a family and from these two come the ability to work together with others.”	“ Wasita ” Year 1 No 3, May 1935
“Give at least one day in a week, especially a weekend to spend with your children.”	“ Keluarga ” (a “Family” Newspaper) Year 1 No 2, October 1937
“Keluarga (Family) in Javanese means Kawula (I) and Warga (my relatives). I may also means a servant. So in a family, a servant also means a relatives and a relative means a servant. They are equal to serve each other. We are one.”	“ Pusara ” 20 th Edition, July 1958
<ul style="list-style-type: none"> • Gerard Heymans (1857-1930). <i>Founder of psychology in the Netherlands</i>. University of Groningen. • Jung CG. 1916. <i>Collected Papers on Analytical Psychology</i>. Dr. Constance E. Long. Bailliere, Tindall and Cox. • Ernst Kretschmer (October 8, 1888 – February 8, 1964) <i>Prof. Dr. med. Dr. phil. h.c., Physique and Character</i> • The Alfred Adler Institute of Northwestern Washington has recently published a twelve-volume set of <i>The Collected Clinical Works of Alfred Adler</i>, covering his writings from 1898-1937 	<p>Articles cited by Dewantara to formulate professionalism for Indonesian education in early 1930’s</p>

influence to Dewantara to practices the student-centred learning approaches. He wrote specific articles about each method from each of the three leaders in education and he also referred to many other experts in education from all over the world in his texts.

Dewantara had continuously explained each stage of life from preschool ages, early school ages, school ages and adolescences, followed by educational methods in which adult may help them to grow and develop physically and mentally until they reach adulthood period. He explained this gradual process of student-centred learning in many of his articles. By repeating the stages of children development, Dewantara succeeded in illustrating students’ prior knowledge, psychological backgrounds, and targets of what to achieve by particular ages. His illustrations can be

the basics of a curriculum design and instructional design. He frequently emphasizes participation-based learning in the context of Indonesia. The cultural rigor in his articles may drive his followers into contextual learning. Both collaborative and contextual learning highlighted by Dewantara are the basis of constructivism theory—the core of student-centred learning.

Table 5 showed free-associations during FGD with graduate students of master in medical education. The results show that they validated our findings of Dewantara’s principles: “equity in education”, “collaborative and contextual learning”, and “observation-based facilitating learning”.

Both of the experts in higher education of Indonesia agreed to our findings. One of experts suggested

Table 5. Free association of “*Tut Wuri Handayani*” by three times FGDs with 30 graduate students of master in medical education

Terminologies in medical education associated with “ <i>Tut Wuri Handayani</i> ”	Frequency	Final interpretation regarding principles of Dewantara found in this study
is a role model of being a teacher	9 times	Validating the all principles found in this study: “Equity in education”, “Collaborative and contextual learning” and “Observation-based facilitating learning”
is to guide the students to be independent thinker	6 times	Validating the “Equity in Education” principle
is part of constructivism theory	4 times	Validating the “Equity in Education” principle
is an observation based learning	4 times	Validating the “Observation-based facilitating learning” principle
is to help the students to learning from mistakes	3 times	Validating the “Observation-based facilitating learning” principle
are opportunities to learn	3 times	Validating the “Contextual and collaborative learning” principle
is continuous dialog between students and teachers	2 times	Validating the “Equity in Education” principle
is providing reflection from experiences	1 time	Validating the “Professionalism” principle
is a learning together opportunity	1 time	Validating the “Contextual and collaborative learning” principle
is a tool to help change the students to better persons	1 time	Validating the “Observation-based facilitating learning” principle

recommendations on the implementation of Dewantara’s principles into current curriculum of basics and higher education. The other expert emphasized that Dewantara’s idea did not born only after his visits to Holland, but he already had a long history of weekly meetings with his friends and colleagues, discussing on how to change their society to be better. His colleagues might come from Santri (Islamic priests) and the royal family of Keraton Pakualaman and Keraton Yogyakarta (Pakualaman and Yogyakarta Kingdoms) and some were coming from the centre of Java.

TWH was uncommon approach of student-centred learning in the period of 1920s when theories of adult learning were still developed.⁹⁻¹¹ TWH was an innovation in education because it was articulated

in the context of a strong hierarchical culture of Indonesia when gaps between children-parents, students-teachers were found to be extensively wide.^{26,29} Dewantara’s ideas are exceptional because it was found in early 20th century before ‘self-directed learning’ and ‘student-centred learning’ was articulated from the Western world. Continuity and comprehensiveness of Dewantara’s articles were proven by our reflection on current evidences in higher education in this study. We did not find a phrase of ‘learning from mistakes’ or ‘student-centred learning’ or ‘constructive feedback’ in Dewantara’s articles. However, our deep interpretation and validation revealed those meanings underlined Dewantara’s principles.

In the view of Dewantara, teachers are ‘artists’ because when they interact with their students they created behaviour and culture that would inspire their students. Therefore, it is challenging for every teacher to have a certain behaviour which would be beneficial to their students to build their future culture. Originated from Dewantara’s idea of cultural influence to learning, came into birth the Ministry of Education and Culture Republic of Indonesia. ‘Education’; in this context, would never stand alone because it would ‘change’ the culture of a nation. That time, the name of the ministry was ‘education and culture’. At this point, Dewantara had come into producing the ‘agent of change’ as the outcome of a transformative education, instead of ‘experts’ as the outcome of information drills or ‘professionals’ as the outcome of socio-learning and problem-based learning processes. Therefore, he had arrived into the most recent global education evidence which suggest ‘agent of change’ as the outcome of a higher educational program.¹

Dewantara ideas of equity between teachers-students, parents-children and furthermore between employee-employers as what he called by “*manunggaling kawula-gusti*” (people and the government should be one) should start a more two-way dialogical exchange information between the two parties. The two-way relationship may create discussions, negotiations and disagreement in which supported by constructivism theory.⁹ At this point, collaborative learning which will stimulate students to interpret meaning of each experience as the main message of the constructivists should occur in the context of this study, according to Dewantara.

His ideas were also outstanding in the context of extensive socio-cultural hierarchical gaps of Indonesian in that period up to at present. The inequity in Indonesian society had affected social, political, and economical dimensions. Many ideas between people may be blocked because of a one-way transfer of information from the higher social hierarchy; instead of a two-way dialogue and balance participation among the two parties. A movement of equity against Indonesian strong hierarchical social culture was also found in recent study in the area of doctor-patient communication.²⁶ Indonesian

patients like to be greeted by the doctors as if they are one of family members. The closer relationship between people in Indonesia was one of the ways towards equity. By this kind of relationship, more two-way dialogue will be established and more learning processes will be attained. Dewantara in early 1930’s already emphasized the importance of unity of mind, feelings, determinations, speech, and actions through an energy called “*budi pekerti*” or a personal character. Dewantara’s idea of using local cultural events and instruments to create more meaningful learning process is also a significant evidence of a student-centred learning principle. He continuously tried to help the learners aware of the world, the reality, which is actually here, where they live, and so learners can learn, interpret and manipulate to provide more benefit to others. At this point, Dewantara had emphasized on ‘work-place-based learning’; as part of constructivism, as the most recent contextual educational programs in medical education.² Learners, teachers, community members, family, may come together cooperatively and collaboratively in a learning process. Moreover, he would like his students to be closer to the lay people surrounding the Taman Siswa boarding schools. Dewantara emphasized the importance of a community-based education in order to provide contextual and collaborative learning experiences as found in recent study of medical education.

Dewantara’s idea of self directed learning was closely related to the other two principles that were equity in learning or collaborative learning and contextual learning. Both are fundamentals of constructivism.^{8,9} Close observations and guiding participation as mentioned by Vigotsky, one of constructivists, should be performed when we help the students to learn from their mistakes. Dewantara with the “*Among-method*” in which teachers should be present at the same time and place with the students, had stressed the foundation of providing observation-based feedback and reflection into learning process. That was the reason of the boarding school of Taman Siswa established, where students and teachers live at the same areas and that teachers will serve as the second parents to the students. In Taman Siswa schools, students do not call their teachers as ‘teachers’ but as ‘guardian’.¹⁴

Dewantara also stressed the importance to help the students' to be independent thinkers and responsible persons by adequate role model and learning activities to perform proper behaviour that was professional and providing the utmost benefit to others. At this point Dewantara empowered a smallest unit of a community that was a family with parents and children to help each other better. He stressed the importance of consciousness of interpreting experiences, including mistakes, so learners may learn better next time and to grow as a person who may provide utmost valuable to others. To help a learner to become a conscious learner requires metacognitive thinking which may be helped by proper constructive feedback.² Although Dewantara did not articulate 'constructive feedback', he did say that it is important to help the students, with passion, to understand their mistakes and learn from that, like parents (should) do to their children.

Limitation of Dewantara's articles were that he did not use general or world-wide phrases in education but he used more Javanese phrases which were not well-known by Indonesian people during his time. He had explained illustrations behind the Javanese phrases; however, it is still difficult for people to understand Taman-Siswa's special ideology. Dewantara's ideas were inadequately understood by his followers, who later could not argue in front of Indonesian government, after his period, of why Indonesian schools should use Taman-Siswa principles.²¹

Dewantara's articles were not translated into English as the Tagore's articles. He had written many articles in Dutch but it was insufficient to make his work world-wide recognized. During the Dutch colonial, not every child has an access to proper education, only the higher social status went to schools. Unfortunately, Dewantara's followers were mostly come from lower social status with inadequate education, which causing less comprehension and discontinuity of Dewantara's ideas.²¹⁻²⁴

Vigotsky and Dewantara live in about similar time of early 1900. Both of their phrases were new phrases of educational philosophy at that period. Vigotsky was a Russian and he used Russian language (not the

English) to explain about 'guided participation'.¹⁷ However, 'guided participation' was followed by detail and clear instructional design on how to step by step help a child to think further. At this point, Vigotsky used 'a scaffolding method' that is one of powerful and helpful methods of facilitating learning and that can be used world-wide and not only at a certain context or culture.

Dewantara on the other hand, did not provide detail instructions, for example on how to help the learners to learn from mistakes. He touched direct observations and guidance but not as specific as questioning methods as Vigotsky did. Therefore, 'how to - step by step' practice facilitate learning as intended by Dewantara, remain uncertain in Dewantara's articles. This limitation was proven as weak arguments of Dewantara's followers (after his period), to keep Taman Siswa schools exist and to be followed by the other Indonesian state schools.²¹ His followers were facing difficulties to explain the "Tut Wuri Handayani" or 'to follow the learners to achieve their utmost potentials' principles; because lack of details and explanation regarding instructional design. In that period, student-centred learning was not either a popular term.

The way Dewantara stressed 'equity' between people, might be one of ways to strive for Indonesia to become an independent nation and not only to strive for better education. However, at that period, he may not realize that socio-cultural inequity was not only existed between the colonial and Indonesian people but between Indonesian themselves.^{26,29} Dewantara's ideas of equity might be drawn into the context of cultural hierarchy of Indonesia. He remained as the head of Taman-Siswa organization until he passed away.²³ Meaning there was lack of involvement of the young fellows. The equity, partnership relationships and two-way exchange information as what he had been steered, did not come into reality in his organization. We understand that cultural hierarchy is an ice-berg of communication and interaction between people in Indonesia and more over Southeast Asia.^{26,28} This kind of cultural gap may not be solved within one generation. However, a student-centred learning approach with equity, learning from reality and learning from mistakes as revealed by Dewantara

should be a way of melting the ‘ice-berg’ of socio-cultural hierarchy of Southeast Asian. This kind of endeavour may consequently last forever. ‘Listening’ and ‘observation’ are the two most important abilities to gain appropriate interpretations and judgmental ability and furthermore planning further learning in a more dialogical way.³ These two fundamental abilities of exploration may come from the early life with a caregiver who should help the small children to maximize their senses through playing games, singing songs, dancing and many more activities as suggested by Dewantara.¹³

As recommendations to teaching and learning in the context of socio-cultural hierarchy like Indonesia and maybe Asia, Dewantara’s messages were clear that teachers should initiate two-way dialogue with their students and that teacher and students are learning together. This kind of effort is still challenging at the moment considering that the hierarchical culture of Indonesian was coming from within family itself. For example, a younger brother should call his elder brother as ‘elder brother’ in front of his name.²⁹ Even a doctor should put him/ her self as younger or elder towards a patient so that the patient may feel that the doctor is one of family members.²⁶ Social hierarchies do exist fundamentally in Indonesian culture. Nevertheless, Dewantara had articulated the equity principles in learning, since the early 20th century, which today is aligned with the current student-centred learning approach.

The second message of Dewantara was also very clear that teacher should make the maximal use of learning resources based on community’s context and culture. He did not only mean that we only allowed using the low-cost materials, but also radios (at that time); which today can be adjusted to the ‘e-learning’. For children, as well as for future health professionals, the senses (e.g. soft skills of communication skills and professionalism) should be stimulated by many experiences of learning in community-based context. Listening, observing, sensing and also doing what lay people usually do in their daily life is important for the students to gain maximum meaning of learning, especially comprehending the bio-psycho-social background of the patients which often underlying many illnesses.

The last message of Dewantara was very challenging in which we should implement an observation-based learning, work-place-based learning, which are the foundation of a good clinical education today.^{5,34} The TWH had emphasized that teachers should follow the students; whom should lead their own learning process. We used to have a perception that a good role-model should be present as a ‘role-model’ of their students; in which the students were the one who observe. However, according to Dewantara, a good teacher should empower their students by close observation, providing feedback, allowing students to reflect from their mistakes and orient their goals towards their independence thinker.

CONCLUSIONS

Dewantara had originated a student-centred learning principle which called “*Tut Wuri Handayani*” / TWH (to follow the learners to achieve their utmost potentials) in the early 20th century. Teachers should let the students to lead the way and this may not be easy in the context of strong hierarchical social culture like Indonesia and Asia. Dewantara was one among distinguished educational leaders in the world.

HIGHLIGHTS

In the early 20th century, the student-centred learning (SCL) approach had been explored, also by one of Asian great teachers: Ki Hadjar Dewantara

The student-centred learning approach in Indonesian context had been undercover for more than a century because lack of qualified publications in this substances and also the main barrier of implementing SCL regarding the wide gaps of socio-cultural hierarchy between teachers and students within Indonesian cultural context

Lessons from the student-centred learning approaches by Ki Hadjar Dewantara which hold: equity between teachers and learners, meaningful learning by using local learning resources and culture and promoting self directed learning, should be promoted to the current teachers in Indonesia, furthermore Asian context

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