PROCEEDINGS

ICONVET 2020
The 3rd International Conference on Vocational Education and Technology

“Future of TVET Graduates:
Developing Talent for Industry 4.0 and The New Normal”

Virtual Conference, Bali – Indonesia
November 7th, 2020
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I Gede Partha Sindu, S.Pd., M.Pd. (Publication)  Universitas Pendidikan Ganesha
Preface

The 3rd International Conference on Vocational Education and Technologies an international forum specially designed by the Faculty of Engineering and Vocational, Universitas Pendidikan Ganesha to bring together academics, researchers and professionals to present their ideas and experiences in a scientific event. IConVET 2020 welcomes paper submissions for innovative work from researchers from diverse backgrounds including students, teachers, researchers, practitioners and the general public in Education, Vocational and Technology. The IConVET 2020 was organized by Faculty of Engineering and Vocational, Universitas Pendidikan Ganesha. It was successfully held in virtual conference format on November 7th, 2020.

The IConVET-2020 theme is "Future of TVET Graduates: Developing Talent for Industry 4.0 and The New Normal". The success of the IConVET-2020 is due to the support of many people i.e. steering committee members, program committee members, organizing committee members, authors, presenters, participants, keynote speakers, student committee, and people in other various roles. We would like to thank them all.

We also want to show our gratitude toward Universitas Pendidikan Ganesha in facilitating and supporting this event so that IConVET 2020 could run smoothly. Last but not the least, we are thankful to IOP Publishing Company for their support in publishing the IConVET 2020 conference proceedings.

December 2020,
Warm Regards,

The Editors:
Made Windu Antara Kesiman, Ph.D
Kadek Yota Ermanda Aryanto, Ph.D
Prof. Harry Avelling
Dr. I Made Gede Sunarya
I Made Putrama
I Made Dendi Maysanjaya

Chairman of the IConVET 2020:
Gede Aditra Pradnyana, S.Kom., M.Kom.
THE CHAIR’S SPEECH

THE 3rd INTERNATIONAL CONFERENCE ON VOCATIONAL AND TECHNOLOGY

November 7th 2020

Om Swastiastu, Assalamualaikum Warahmatullahi Wabarakatuh, Namo Buddhaya, Shalom. May peace be with us all.

First of all, let us send our profound gratitude upon Ida Sang Hyang Widhi Wasa, the Almighty God, for His blessings of the opportunity to have this international conference. As the chair of the committee, I feel honored and delighted to welcome you all in the 3rd International Conference on Vocational and Technology (IConVET) which has a theme: “Future of TVET Graduates: Developing Talent for Industry 4.0 and The New Normal”.

This conference is an international forum organized by the Faculty of Engineering and Vocational, Universitas Pendidikan Ganesha to bring together academics, researchers, and professionals to present their ideas, experiences, and research in a scientific event. It brings together state of the art research in vocational education and technology. To support the Indonesian government's efforts in preventing the spread of the Covid-19 virus, this year IConVET is being held in a new format with the concept of virtual conference. Virtual conferences are held without reducing the benefits of this international event and hope that all of us will always be given health.

Distinguished guests, Ladies and Gentlemen,

This 3rd International Conference on Vocational and Technology is attended by participants from more than 40 different university and institute, who represent four different countries, namely Indonesia, Taiwan, Iraq, and Netherlands. We received 105 submission of full papers and through a quite tough review process, the conference finally accepted 86 papers for presentation. Therefore, on behalf of the committee and the Research Institute of Universitas Pendidikan Ganesha, let us extend our greatest appreciation to all of you who have supported us and contributed your manuscripts to our conference, as well as to the panel of reviewers who have helped us in the selection process.

Ladies and Gentlemen,

in our beloved international conference, we are proudly address that we have 3 honorable keynote speakers: Prof. Dr. Thomas Kohler from Dresden University of Technology, Germany, Prof. Dr. Drs. Putu Sudira, MP. from Universitas Negeri Yogyakarta, Indonesia, and Ferry Jie, Ph.D. from Edith Cowan University, Australia. On this blessed occasion, let us express our heart-felt thanks and appreciation for all of our keynote speakers and panelists.

Ladies and Gentlemen,

This conference would not be possible if there were no encouragement and support with its various forms from many parties. Therefore, let us acknowledge, first, the Ministry of Education and Culture also the Ministry of Research and Technology/National Research and Innovation Agency, for the supports that have been given to our University in Indonesia through its research funding so that our researchers could conduct their research. Second, the Rector of Universitas Pendidikan Ganesha for his endless commitment and encouragement to the organizing committee so that we can make this event a reality. The local government of Bali and Buleleng Regency for their commitment to maintain sustainable cooperation with Universitas Pendidikan Ganesha in conducting joint research pertinent to local societal issues. And last but not least, the Research and Community Service Institute of Universitas Pendidikan Ganesha and all the organizing committee members for the hard work and never ending cooperation to make this event come true.
Finally, in the name of the organizing committee, we thank you for participating in our 3rd International Conference on Vocational and Technology. Have a nice and fruitful conference. God bless you.

Om Shanti, Shanti, Shanti, Om, Wassalamu’alaikum Warahmatullahi Wabarakueth, Namo Buddhaya.

Singaraja, November 7th 2020
Chair

Gede Aditira Pradnya, S.Kom., M.Kom
WELCOME NOTE

THE 3RD INTERNATIONAL CONFERENCE ON VOCATIONAL EDUCATION AND TECHNOLOGY

November 7th, 2020

Om Swastiastu,
Assalamualaikum Warahmatullahi Wabarakatuh,
Namo Buddhaya,
Shalom,
Salam Kebajikan.
May peace be with all of us.

Let us praise the Almighty God, Ida Sang Hyang Widhi Wasa, because with his blessings, we can gather here today on a precious occasion, on the 3rd International Conference on Vocational Education and Technology (IConVET), hosted by the Faculty of Engineering and Vocation, Universitas Pendidikan Ganesha, Bali, Indonesia. Let me also extend my warmest welcome to the Keynote Speakers for this event. It is a great pleasure to have esteemed scholars to speak at our conferences.

Ladies and Gentlemen,

It is an honor for me to stand here and welcome you today as we seek to embrace scholars, researchers, and practitioners in technology and vocational education in an academic discussion that is expected to bring forward the advances in technology and its application in vocational schools to help our nation face Industrial Revolution 4.0, Society 5.0, and also New Normal Era.

Our theme for IConVET this year is “Future of TVET Graduates: Developing Talent for Industry 4.0 and the New Normal”. This theme has a vision on the importance of the latest TVET education, which is to prepare TVET graduates to compete in the era of the Industrial Revolution 4.0. As we all know, the Industrial Revolution 4.0 integrates cyber technology and automation technology. The impact of the Industrial Revolution era 4.0 is that it no longer empowers the human workforce in its application because everyone has applied the concept of automation. Of course, this is a challenge for TVET graduates, which is to be able to survive and contribute to it. The challenges in TVET education also increase when we are faced with a new normal era, which has emerged due to the Covid-19 virus outbreak. But we must be confident, with our shared roles and the right education, we will be able to create the best TVET graduates for the future.

I congratulate the committee for choosing a very state of the art theme and for organizing this event from the scratch, until today, and also all the post-conference activities in order to get the articles published by an esteemed publisher, through which our discussions today can create ripple effects that reach the intended audience across the world.

Valued Scholars,

Allow me to extend my congratulations to all the participants and presenters in this 3rd International Conference on Vocational and Technology, for taking the forerunner positions in Industrial Revolution 4.0 and Society 5.0. Thank you for your contributions to this conference and the development of education, technology and vocational education.

Last but not least, I wish you a very productive conference and God Bless you.
Om Shanti, Shanti, Shanti, Om, Wassalamu’alaikum Warahmatullah Wabarakatuh, Namo Buddhaya, Shalom, Salam Kebajikan.

Singaraja, November 7th, 2020
Rector of Universitas Pendidikan Ganesha

Prof. Dr. I Nyoman Jampel, M.Pd.
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