



Tata Institute of Social Sciences

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School of Vocational Education
Incubation of National Vocational University

Project Report
March 2012 - March 2017



Tata Institute of Social Sciences Mumbai

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Message from the Director

The School of Vocational Education (SVE) is emerging as a model for the nation for skill development through Work Integrated Training. The Institute set up SVE in December 2011, with a vision of creating an ecosystem that would bring dignity of labor to all professions and occupations and create sustainable sources of income for the youth in the country.

The Vocational Educational Program is being implemented with a focus on job-specific skills. The SVE has demonstrated "Work Integrated Training" model –with the help of a strategic partnership forged with hundreds of diverse industries using the Hub and Spoke Model to train and employ the skilled. Currently a large number of students are enrolled in Certificate, Diploma and B.Voc. Degree programs in 19 different sectors such as Early Child Development, Child Protection, Geriatric care, Dialysis Technology, Hospitality, Sales Management, Pharmaceutical Chemistry, etc.

The School of Vocational Education was set up and nurtured with financial and substantive support from the All India Council for Technical Education. We thank the AICTE Chairman, Vice Chairman and Director for hand-holding and supporting the Tata Institute of Social Sciences in this skill development project for the last 5 years.

S Parasuraman

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Executive Summary

In March 2012, TISS signed an MoU with AICTE under the aegis of MHRD for incubation of a National Vocational University (NVU) with a seed grant of INR 10 crores. The initial project duration of 3 years was extended to 5 years and this report captures the main achievements towards the incubation of the NVU.

The project started with the establishment of a School of Vocational Education within TISS for implementation of the same. After a few trials and errors, we were successful in developing a robust model of involving different partners for imparting quality skill training, using a Work Integrated Training model. **The concept of work-integrated training has been borrowed from the German model of vocational education and has been modified to suit the Indian context.** The courses are based on the National Skills Qualification Framework (NSQF) and follow the UGC guidelines for B.Voc.

The TISS-SVE model involves three types of partners in the course delivery. The **Vertical Anchors** design the job oriented courses based on demand in the sector and develop curriculum and content for the same and also conduct 'Train the trainer'. The **Hub partners** are the training partners involved in classroom training and coordinate with Skill Knowledge Providers for the skill-training component through on-the-job-training (OJT). The **Skill Knowledge Providers (SKP)** provide the opportunity for skill training through internship or on the job training and also provide a stipend to the students. TISS-SVE anchors and monitors all the functions of the partners and is responsible for the assessment and certification. The number of partners is steadily increasing and as of now we have 19 Vertical Anchors, 184 Hubs and 330 Skill Knowledge Providers. Over a period, this model has evolved to include different elements of checks and balances to ensure quality skill education.

The customized ERP enables the efficient management of the finances, enrollment, students' data, monitoring of partner activities, etc.

We have been able to roll out 25 B.Voc. programs, 15 Postgraduate Diploma courses, 111 certificates and short term courses so far in 18 different sectors. The sectors include Agriculture, Automotive, BFSI, Child Care and Geriatric care, Dialysis Technology, Electronics, Hospitality, Health care, Industrial Safety, Industrial Tool Manufacturing, ITES, Management and Entrepreneurship, Media and Entertainment, Pharmaceuticals, Printing and Packaging, Renewable Energy, Telecom and Travel and Tourism.

The Navajbai Ratan Tata Trust has supported the social vertical courses in Child Care and Geriatric care.

The number of students who have completed the courses so far stands at 3202. Currently we have 5344 students undergoing the skill training in different verticals across the hubs. The courses are being submitted for inclusion in the National Qualification Register (NQR) of the National Skills Development Agency (NSDA).

The online examination platform for the theory component is ready for use from the next semester examination (Jun 2017) and the process of standardizing the practical assessment at the workplace is being finalized.

The main features of the TISS-SVE model of skill training are:-

- 1. The choice of courses to be offered is based on the demands for a skilled workforce in the respective sectors.
- 2. It is relevant to industry needs as the courses are designed and implemented with active participation of the industries.
- 3. It allows inclusion of the 'Earn while you Learn' opportunities for students.
- 4. It is scalable as the training hubs are located in the vicinity of the industry where the students learn on the job.
- 5. Students get a degree along with work experience of three years; thus, leading to enhanced employability in comparison to the conventional degree courses.
- 6. This model requires minimum investment to offer the training on the latest equipment for different vocational courses. The practical training facilities with latest machinery and equipment are made available by the SKPs.
- 7. These courses can also be offered to existing employees of the industry and provide them a chance to complete their education up to the degree level thus enabling upward mobility.

During the project period of 5 years, TISS-SVE has been successful in demonstrating a cost effective, scalable model of imparting job oriented courses at NSQF levels 5, 6 and 7. It was also an incubation project for establishing a National Skills University. It demonstrates how a Skills University must offer vocational courses in a different mode as compared to the conventional model of institution based training and how industry involvement can make the students job-ready and bring down the cost of training. The project in the current scale has now become self -supporting, though much larger resources would be required for establishment of a National Skills University.

Lessons Learnt

- 1. The nature and functions of a Skills University should be different than a conventional University set up.
- 2. The demand driven courses are welcomed by the industry and the acceptance can improve if the B.Voc. courses are included in the National Apprenticeship Promotion Scheme (NAPS).
- 3. The course curriculum should be dynamic and should have the scope for modification as per the specific needs of the industries
- 4. The Skills University should have **pan India Jurisdiction**, so as to offer specific demand driven courses across locations in India (where the industry may be located/functioning).
- 5. Looking at the large number of students across India, multiple strategies will be needed. Since many schemes are concentrating on the 1 to 4 levels of NSQF, the Skills University can create courses in the space of higher education that will provide opportunities for students to complete a degree in a vocational field.

Introduction

India is blessed with a demographic dividend. However, this dividend if not leveraged properly can lead to a large number of unemployed, unemployable and underemployed people. This in turn can pose a challenge to the social fabric and future of the society. The expanding economy is in need of a large number of trained, skilled labour force and the challenge is to match this demand with the aspirations of the younger generation to get a qualification that has the potential for upward movement and/or self employment.

Many initiatives have been undertaken by different government departments and vocational training institutions to provide job oriented skill training on a large scale. However, the success of these efforts has been quite limited. In Indian society, an individual pursuing main stream education has a glorified status as compared to an individual pursuing vocational education. Vocational Education is viewed as a reluctant option for those who are less privileged, incapable of pursuing main stream education or for the vulnerable sections of society. This is primarily due to the fact that vocational education in India is not within the purview of a formal structured program at the University level with equivalence to main stream education. Considering the general mindset of people in Indian society, there is a compelling need to formalize vocational education at the university level. This will promote wider acceptance of the program by the individual undergoing the program as well as at the user level (manufacturing and service sector).

Providing for a formal and structured career progression on opportunity and channel is essential for rekindling the interest of youth in skills and crafts as careers in our modern and growing economy.

TISS has already embarked towards the national skill building initiative by setting up the School of Vocational Education. The school has been incorporated to spearhead the Vocational Training envisaged in the initiative proposed by AICTE under the aegis of the Ministry of HRD, Government of India. TISS has signed an MOU with AICTE in March 2012 for this initiative. The ultimate aim of this initiative has been to incubate the National Vocational University, for which a seed grant of Rs.10 crores was sanctioned through the MoU with AICTE. The initial term of the MoU was for three years and was extended up to March 2017. As per this agreement, we have completed the pilot and are ready with a blue print to set up this university by March 2017. The progress of the activities under this project is elaborated in the next few pages.

Tata Institute of Social Sciences

The Tata Institute of Social Science (TISS) is a premier institute of Social Work in India. It was established in 1936 and was recognized as a Deemed University by the University Grants Commission (UGC) of India in the year 1964. The vision of the institute is to be an institution of excellence in higher education that continually responds to the changing social realities through the development and application of knowledge, towards creating a peoplecentered and ecologically sustainable society that promotes and protects the dignity, equality, social justice and human rights for all, with special emphasis on marginalized and vulnerable groups.

As of today, TISS has campuses in Mumbai, Hyderabad, Tuljapur and Guwahati. Furthermore, it hosts 20 Schools, 8 Independent Centres and 3 Resource Centres. The strength of TISS has

been in the development of multi disciplinary social sciences courses to train human service professionals for the nation.

School of Vocational Education (SVE):

In December 2011, Tata Institute of Social Sciences set up the School of Vocational Education (SVE) to provide immediate and definite interventions to improve the lives of the disadvantaged and marginalized youth, especially those who are excluded from the formal school education system, through appropriate vocational training programs. It was decided that the training program would be inclusive in nature and structured in a way to facilitate vertical movement of the organized and unorganized labour and facilitate the participation of women, children, the PWD and other vulnerable groups. Therefore, SVE has been set up with a vision of creating an ecosystem that would bring back the dignity of labour for blue collar streams of work and create sustainable sources of income for the marginalized youth in the country.

Progress Note on the Various Objectives of the MOU is mentioned below:

1. Research into Vocational Education

At the time of signing the MoU there was no established model for a Vocational University. Therefore, the efforts by TISS towards incubation may be regarded as an Action Research project. The current model of TISS-SVE vocational education evolved over a period of time through trials and refinements as we started working with initial concept and started getting partners to join us in this innovative experiment of developing a sustainable model of work integrated training.

AICTE had given the mandate to TISS, beginning through SVE, to offer certificate and diploma courses in various vocational streams as per the National Skill Qualification Framework (NSQF) under its aegis. For this purpose, TISS had initially adopted the Community College Model wherein, the training begins with basic orientation and job skills modules, covering the aspects of the 'World of Work' that the student is going to enter. This transition will be designed to be seamless to reduce drop-out while the delivery will be through a work integrated approach. The model proposed was demand driven and, thus, ensured employability.

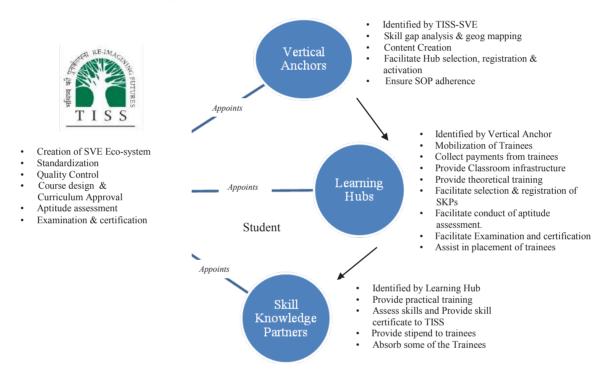
Policy changes permitting, advanced degree programs also were to be offered with potential cross-transfers to the academic streams to pursue degree and diploma courses. Short term vocational course certificates were to be awarded solely by TISS (in the capacity of a Deemed University).

Due to lack of clarity in the process of granting equivalence (main stream education levels of SSC and HSC) to students enrolling under the Community College Model, we were unable to cater to the group of school drop-outs. Also, with the recent UGC scheme of initiating B. Voc. programs through Universities and colleges, we have primarily focused on enrolling only 10 plus 2 level students for vocational courses. Through the B.Voc. program, it is expected to offer vocational courses at the 5th, 6th & 7th level of NSOF.

Over a period of the last five years, the School of Vocational Education, Tata Institute of Social Sciences has worked towards developing a sustainable model of ecosystem that can offer a variety of vocational courses and has also been successful in making the initial preparations needed to establish India's first of its kind National Vocational University.

Delivery Mechanism of TISS-SVE

TISS- SVE aims to achieve its objectives through a network of numerous partners to enable it to reach out to the millions of youth across the country who need and deserve a good quality vocational education. TISS-SVE associates with different partners with very specific roles & responsibilities as enumerated below.



It has been ensured that TISS-SVE will closely monitor all the important aspects of the vocational education programs offered with the help of the partners. The necessary mechanisms for safeguarding the interests of the students and quality control are in place. We have a robust ERP system developed and implemented to seamlessly manage the eco-system.

2. Studies on Skill Requirements and Development in the Country

TISS-SVE started with looking at different skill development initiatives by the government and non government agencies including National Skills Development Corporation (NSDC) and others. The studies on skill gap or requirements were available on NSDC as well as on other websites. Therefore, we did not repeat these exercises. However, the review of international skill development programs especially from Germany and other European countries revealed that the work integrated training models are highly successful in providing job oriented skill training to the students and they could be job ready by the time they graduate. We have tried to adapt this concept of work integrated training to suit the Indian context.

We took advantage of the expertise and experience of 'Vertical Anchors' who joined us as partners for different sectors. They had a fair idea about the industry requirements for skilled manpower in their respective sectors and helped us design the courses to suit the industry needs. This being a **demand driven** model, no course could be started unless there was an industry or company ready to absorb the students for work integration. Therefore by default, the Vertical Anchors facilitated the process of hub selection in the locations where work integration is possible. The 'Vertical Anchors' designed the courses in consultation with representatives from the relevant industry. All the courses were designed by keeping in mind the NSQF levels as well as the UGC guidelines for B.Voc. As a result we now offer courses in 18 different sectors at different levels such as Certificate, Diploma, Advanced Diploma, B.Voc. Degree and P.G Diploma. In addition, we offer several customized skill enhancement courses as per the demand from the field.

Main Features of Work Integrated Training by TISS-SVE through Industry Partnership

TISS-SVE has been successful in initiating a new vocational education eco-system in India in association with AICTE. This is a Vocational Education program focusing on job specific skills rather than providing a broad and varied education. TISS-SVE focuses vocational education programs for various verticals starting from Agriculture, Automotive, BFSI, Child Care and Geriatric care, Dialysis Technology, Electronics, Hospitality, Health care, Industrial Safety, Industrial Tool Manufacturing, ITES, Management and Entrepreneurship, Media and Entertainment, Pharmaceuticals, Printing and Packaging, Renewable Energy, Telecom and Travel and Tourism.

The concept of work integrated training has been borrowed from the German model of vocational education and has been modified to suit the Indian context.

Work Integrated Training Program (WITP) is where students learn the skill by engaging in on-the-job training at the real shop floor of the industry/company. For effective delivery of this model, we are leveraging on the expertise of several partners such as Vertical Anchors, Hub partners and Skill Knowledge Providers. Vertical Anchors (VAs) are expected to design a job oriented vocational course syllabus. Hub partners are training institutes with basic infrastructure for classroom training. They provide the classroom-based training. The Skill Knowledge Providers facilitate on the job training. The Skill Knowledge Providers (SKPs) include hospitals/industries/companies/NGOs.

- 1. The aim of our WITP is to provide the trainees the opportunity to enhance their skills and gain workplace-based industry experience as a part of their vocational education program. For the trainee, the experience is valuable as training is built around the context of work, enabling them to learn by working and observing.
- 2. This model also allows to design the program with an 'Earn while you Learn' feature. This feature enables the trainee to earn a stipend during the on-the-job training to support their expenses of vocational education. Although it is not mandatory for any institution to provide for the stipend, by and large, TISS-SVE strongly encourages its Skill Knowledge Providers to do so.

- 3. TISS-SVE, through its training partners, ensures provision of the requisite structured classroom sessions while inducting them into the work settings. The WIT program would further train students to perform better in a highly technically advanced world. It gives them a platform to learn the duties and responsibilities of various employees while they are student-trainees at the facility.
- 4. Students get a degree along with work experience of three years. Thus, the employability of the courses is many times enhanced as compared with conventional degree courses.
- 5. This model requires minimum investment to offer training on the latest equipment for different vocational courses; as for the practical training, latest machinery and equipment are made available by the SKPs.
- 6. These courses can also be offered to existing employees of the industry and provide them a chance to complete their education up to the Degree level and can achieve their aspirations for upward mobility.
- 7. The model has the scope for designing a number of courses as per the needs of specific industries and therefore, it is highly scalable.

Thus, TISS-SVE has been able to create an ecosystem that will provide an opportunity for gainful employment with career progression to innumerable youth. We have taken into account the requirements of a robust model to ensure quality in curriculum design, standardization in course delivery, flexibility in assessment of practical training and many other related aspects. These features are listed below.

A. Centre of Excellence (COE)

We have created the Centre of Excellence (COE), which is a committee of experts from the respective fields. This committee assists in vetting of the syllabus, course content and appointment of trainers. For each of the 18 Verticals, a Centre of Excellence has been appointed. The composition of the COE includes a chairperson and 6-7 members. These COE members are from the industry with proven expertise of more than 10 years in the respective vertical/sector. At the moment, 95 COE members' empanelment process has been completed for all the 18 verticals. We keep on adding new members as per the need of the sector/vertical.

B. Legal Agreements with all the Concerned Partners

This program is being managed by engaging many partners in different capacities and therefore it was necessary to get into legal agreements with all the partners that would safeguard the interests of the students. All the money is collected by TISS through the online payment facility and each student gets an ID card of TISS. The agreements with non- performing partners are terminated as per the provisions in the agreement.

C. Developing a Customized ERP for TISS-SVE

The success of any education program depends on keeping updated information related to the students and all other players. We have developed a customized ERP system that captures all the information on students' life cycle, finance and

other functions like content development, examination and certification and all the relevant information. Some of the features are still under development but most of the critical functions are operational. This helps us keep track of more than 10,000 students enrolled in different courses across 180 plus hub partners.

D. Creation of a Vocational Aptitude Test

TISS entered into an agreement with **Defense Institute of Psychological Research (DIPR)** to develop vocational aptitude tests to guide prospective students to choose the appropriate vocational course. Three junior research fellows (JRFs) were employed to work with the scientists from DIPR for this purpose. The team has worked towards putting in place a user friendly, comprehensive, reliable and software enabled system that can be administered to gauge an individual's aptitude and natural ability to learn a particular trade and guide the candidates to choose the appropriate trade.

Vocational Aptitude System (VAS) had undergone many changes and modifications because of the pilot study and live administration conducted in year 2014-15. Finally, a well-designed VAS for initial 4 verticals (Dialysis Technology, CNC Machine Operations, Welding and Printing) was ready to use. The test is developed through job analysis (observation of a real work scenario) and its reliability is found to be high. All tests were found valid on normal probability curve.

The 7 tests developed in VAS -Phase I are:

- 1. Abstract Reasoning Test
- 2. Concentration Test
- 3. Attention Test
- 4. Control Precision Test
- 5. Hand-Eye Coordination Test
- 6. Colour Distortion Test
- 7. Colour Matching Test

On 6th July 2015, Junior Research Fellows administered the vocational aptitude battery of tests for Dialysis Technology trade at the Apex Kidney Care Centre, Malad, Mumbai. The test was administered on 16 students who had opted for the B.Voc. in Dialysis Technology.

The VAS team visited Iqraa Hospital Calicut, Kerala on 21st and 22nd July 2015 and administered the vocational aptitude battery of tests for Dialysis Technology trade on 70 students who had opted for the B.Voc. in Dialysis Technology.

Development of VAS - Phase-II

TISS- SVE organized a meeting with Defense Institute of Psychological Research (DIPR), Delhi on 8th July 2015 to reframe and finalize the purpose of developing

VAS and its implication as per the current status/requirement of SVE. As an outcome of this meet, an ability wise methodology was finalized for further test development and to develop tests for additional 13 verticals.

Accordingly, JRFs have completed the step of job analysis and priority calculation for the remaining verticals.

During the training session held on the 4th and 5th of July 2016 at DIPR, Delhi, after brainstorming with scientists Dr. Gurpreet Kaur and Dr. Soumi Awasthy, seven tests were finalized to be developed in Phase- II of VAS.

- 1. English Language Test
- 2. Numerical Test
- 3. Dexterity Test
- 4. Persuasive Communication Test
- 5. Visual Ability Test
- 6. Sustained Attention Test
- 7. Abstract Reasoning (with respect to organizational ability)

JRFs are currently working on the next step for developing the Vocational Aptitude System, which is Item Development for the above 7 tests.

E. Appointment of Counsellors at Different Locations

The SVE staff cannot be in direct touch with the students. To ensure that we connect with the students to understand their problems, if any in the course delivery or at the SKP, it was necessary to have someone who can develop a rapport with them in a way that the communication will not have any bearing on their performance. Through the empanelled counsellors in hub locations, we try to plan at least one session every month covering different topics that may be of interest to the students. This helps in the personality development of the students and provides an outlet for them to express something that may be bothering them. The system is getting refined. A ten sessions module for the first year students has been rolled out and we are in the process of developing the modules for the 2nd and 3rd year.

F. Regular Monitoring and Supervision

For the purpose of monitoring and supervision, regular visits by the SVE staff are scheduled. These are usually at the time of induction of a new batch, meetings with the hub and SKP authorities or at the time of theory and practical examinations. In addition we are in the process of establishing a system of monitoring by the respective Vertical Anchors and by on-site supervisors. We are in the process of empaneling the on-site supervisors at each location and scheduling surprise visits by them to the hub location and submitting a report. All this will also be captured in the ERP.

G. Tie up with NIOS for addressing School Drop outs

Weare in discussion with the National Institute of Open Schooling (NIOS) regarding the rollout of skill courses that can be aligned to class 10th and 12th equivalence and can act as an entry point to B.Voc. programs under TISS. This will enable us to reach out to students who could not complete their S.S.C. or H.Sc. through the formal system. A roundtable conference was organized on 5th November 2016 at National Institute of Open Schooling (NIOS), Noida in partnership with the School of Vocational Education - Tata Institute of Social Sciences Mumbai. The conference witnessed participation of representatives from National Skill Development Corporation (NSDC), National Skill Development Agency (NSDA), All India Council for Technical Education (AICTE), National Association of Software and Services Companies (NASSCOM), Aditya Birla Foundation, various sector skill councils, industry and vertical anchors of TISS- SVE.

All the above mentioned activities have been instrumental in refining the model to the present stage. This according to us is the Action Research project of developing a **viable**, **scalable** and **cost effective** model of Skill Development.

3. Building Content for Various Sectors Based on NVEQF (now NSQF)

The UGC has issued guidelines for all Universities for designing B.Voc. programs. The three years of B.Voc. courses match with the 5th, 6th and 7th level of NSQF. It also provides for multiple entry/exit possibility of the students. After the 1st year, the student is awarded a Diploma, after the second year he/she gets an Advanced Diploma and at the end of the third year, the B.Voc. degree is awarded. The syllabus is expected to include certain general education courses along with vocational theory and practical training.

The curriculum in each of the years of the program would therefore be a suitable mix of general education and skill development components. Curriculum for each course is designed before introduction of the courses and is vetted by the respective COEs. This curriculum is then ratified by the Academic Council of TISS.

The credit weightage for the B.Voc. courses as per UGC guidelines is given below. This forms the common credit structure for all the B.Voc. courses offered by TISS-SVE.

SEMESTER-WISE DISTRIBUTION OF CREDITS (VOCATIONAL + GENERAL EDUCATION)

Semester	Recommended Vocational Theory Credits	Hours	Vocational Practical Credits	Hours	General Education Credits	Hours	Total Hours
Semester 1	6	90	12	360	12	180	630
Semester 2	6	90	12	360	12	180	630
Semester 3	6	90	12	360	12	180	630
Semester 4	6	90	12	360	12	180	630
Semester 5	6	90	12	360	13	195	645
Semester 6	6	90	12	360	13	195	645
Total	36	540	72	2160	74	1110	3270

A. General Education Component

The general education content is common for all vocations and it has been developed by TISS-SVE. This ensures that all the courses will deliver the same general education content and the method of delivery will also be uniform. The general education component adheres to the normal university standards. It emphasizes and offers courses which provide holistic development. Adequate weightage is given to language and communication skills along with other aspects such as livelihood management, presentation skills, accounting and computational skills.

The following is the distribution of the general education courses over 6 semesters.

Semester	Course Code	Course Title	Credits
1	GE 1.1	English –I	6
'	GE 2.1	Communication Skills -I	6
II	GE 1.2	English – II	6
"	GE 2.2	Communication Skills II	6
	GE 2.3	Communication Skills - III	6
III	GE 3.1	Basics of Computing Skills-I	6
11.7	GE 2.4	Communication Skills - IV	6
IV	GE 3.2	Basics of Computing Skills-II	6
	GE 4.1	Basics of Accounts-I	4
V	GE 5.1	Livelihood-I	6
	GE 6.1	Finishing School-I	3
	GE 4.2	Basics of Accounts-II	4
VI	GE 5.2	Livelihood-II	6
	GE 6.2	Finishing School-II	3
TOTAL			74

We are planning to review and revise the general education courses before the commencement of the next academic session.

B. Vocational Education Component

The Vertical Anchors have submitted the course outline for their respective verticals. This was vetted by the respective COEs and submitted to the TISS Academic Council for approval. A total of 162 courses (combination of B. Voc./ Diploma / Certificate / Skill Enhancement Program) are being rolled out. Please refer to Annexure A for the course list.

The focus of the vocational education component is to equip students with appropriate knowledge, practice and attitude, so as to become work ready. The vocational education component is relevant to the industries as per their requirements. The curriculum aligns itself with the National Occupational Standards (NOSs) of specific job roles within the industry sector(s) wherever available and also with the NSQF levels. This enables students to meet the learning outcomes specified in the NOSs. Moreover, adequate attention is given in the curriculum design to practical work, on the job training, development of student portfolios and project work. There will be a continuous review and the same will be updated in the curriculum.

For each of the general and vocational education courses over the six semesters, we have developed the detailed content. It contains two parts – the facilitator's guide and the participant's workbook. This ensures standardised delivery of the course content across all the hubs. In addition, students are expected to fill up the practical log book. Every week students record practical experiences during the week and the supervisors at the workplace sign the same. This record is considered during the internal assessment.

We are in the process of getting the course curriculum registered in the National Qualification Register of NSDA. This will ensure the NSQF compliance of levels 5, 6 and 7 as per NSDA requirements.

4. Developing Teaching Methodologies and Pedagogy

Since it is a work integrated training program, we had to develop flexible mechanisms to ensure that the students complete adequate hours of theory training. More weightage is for practical training as compared to the theory inputs (60:40)

We are also exploring the possibility of delivering some of the content through online mode where students can complete the same at their own pace. Negotiations with Wadhwani Foundation are being done for the development of these modules.

5. Training the Trainers (TTT)

All trainers are identified by the HUB partners and their details are sent to TISS-SVE. For the General Education module, the trainers are interviewed and approved by experts from TISS-SVE. The trainers for the vocational component are interviewed and approved by the COE. TTT program is a very important activity for standardization of course delivery. To support the HUB partners in standardising the training delivery, regular TTT program is conducted. The TTT programs for General Education are conducted by TISS-SVE. For the vocational theory component; however, the Vertical Anchors are expected to take care of the TTT programs.

6. Methodology for Skill Assessment and Skill Accreditation

The Examination Board of TISS-SVE acts as a central body to conduct the standardized and uniform examination and evaluation process across the verticals. This will help to ensure fair evaluation of a student's knowledge and credibility achieved through the training. Some of the initiatives under the skill assessment and skill accreditation are mentioned below:

A. University Credit System Adapted to Skill Development

- A 10-point grading system recommended by UGC is adopted with some modifications.
- Marks are converted into grade points and grade points are converted into average grade points for each semester examination(s).
- The grade cards are issued post completion of each semester to trainees/ students as per the UGC guidelines.
- Consolidated grade cards are for three years, which are issued to students on the completion of the B.Voc.. program.

B. Creation of an Examination Board and Empanelment of Examiners for Each Sector

- 1. The Board of Examination and Evaluation is constituted for taking policy decisions for improvement in the examination system, approval to the appointment of invigilators, paper setters, examiners and referees.
- 2. Invigilators, paper setters, examiners and referees are empanelled and appointed region wise on the basis of qualification and experience.
- 3. Invigilators, examiners (theory and practical) are appointed by TISS-SVE and they work on behalf of TISS-SVE, as per the guidelines issued.
- 4. The appointed invigilators and examiners are working on behalf of TISS-SVE, maintaining the dignity and identity of the institute for smooth conduct of examinations.

C. Online Examination Platform for Theory Papers

To ensure consistency in the quality and uniformity in the examination process, an online examination platform is being created. This will ensure that examinations are conducted in a fair and neutral environment and the results are declared within timelines. All assessment of theory (objective & subjective questions) will be done online for maximum integrity and transparency. The exam platform will be integrated with the ERP.

The key features of the on-line module are mentioned below:

- 1. Ability to create multiple types of questions, multiple choice, using text, video and graphics.
- 2. Ability to conduct examinations which require uploading of a document (text/picture/video)

- 3. Ability to print question papers.
- 4. Ability to type in subjective answers.
- 5. Be able to conduct an online, timed test.
- 6. Possibility of continuing from where the test discontinued because of technical issues.
- 7. Questions to be labelled as per different degrees of difficulty.
- 8. Ability to store a question bank.
- 9. Ability to have different marks for different questions.
- 10. Ability to choose questions from a bank to create multiple question papers.
- 11. Ability to assign students to specific tests/exams. Generate a login-ld and password.
- 12. If multiple question papers created, a software to assign the same at random to students taking the exam.
- 13. Ability for students to come back to a specific question during the exam.
- 14. Ability to set the start & end timing of an exam as per server timing.
- 15. Ability to have a combination of automated paper checking (for multiple choice) as well as manual entry of marks for subjective questions.
- 16. Ability to assign an examiner for each exam.
- 17. Ability to assign an invigilator (login/password) for each exam with read only access.
- 18. Ability to allow import and export of data (student data/exam questions/responses/marks, etc).
- 19. Ability to create question papers in multiple languages.

For conducting an online examination, one needs to have a question bank of a large number of questions for each course and therefore will need considerable amount of money to develop these tests.

D. Question Bank of 9000 Questions per B.Voc. Course

- 1. A question bank is prepared for every vertical creating about 9000 questions for each B.Voc. course.
- 2. The question bank contains a combination of objective questions, such as multiple choice questions, true or false etc. and subjective questions.
- 3. Approximately 250 questions are prepared for each credit.
- 4. Subjective and Objective type of questions are prepared by considering the level / degree of difficulty, e.g., 1 Easy, 2 Moderate, 3 Difficult etc.

5. The vetting of a question bank is carried out by appointing third party experts from reputed organisations.

E. Practical Examination Conducted at the Place of Work

- 1. Practical Examinations are conducted at the place of work.
- 2. External and internal examiners are appointed for conducting the examinations. 50:50 pattern of assessment is followed as per UGC norms.

An Assessment/Evaluation criterion is prepared as per the norms of the concerned vertical and the kind of work experience the students have during the placement at the industry/company.

We are in the process of appointing assessors approved by Sector Skill Councils in each vertical.

7. Creation of Best Practices Document in Vocational Education viza-viz its Relation to NVEQF (NSQF)

The primary objective of the TISS-AICTE MOU was to incubate the National Vocational University. All efforts have been channelized in developing a sustainable model of eco-system that can offer a variety of vocational courses. We have also been successful in making the initial preparations needed to establish India's first of its kind National Vocational University. The proposal for setting up the National Vocational University has been submitted to the MHRD in July 2016.

Some of the other initiatives with regard to the creation of best practices are mentioned below:

- Creation of Standard Operating Procedure documents for each and every process of the SVE.
- Registration as a National Employability Enhancement Mission (NEEM) agent to facilitate skill development.
- Listing of courses as per guidelines of National Apprenticeship Promotion Scheme, (NAPS).
- Provided inputs for Skill University Bill.

8. Miscellaneous

To ensure provision of high standard and quality of vocational education to students, many value adding initiatives are being implemented.

- Training feedback gathered from 15% of the students in each batch, using telephonic /personal interview.
- Grievance redressal committee appointed.
- Setting up of a sexual harassment committee.

- Registration with DAVP for student mobilization.
- Creating presence on Social media platforms like Linkedin and Facebook.
- Registration on Google to get free USD 10,000 worth of google ads budget per month for student mobilization.
- Creation of a quarterly news letter.

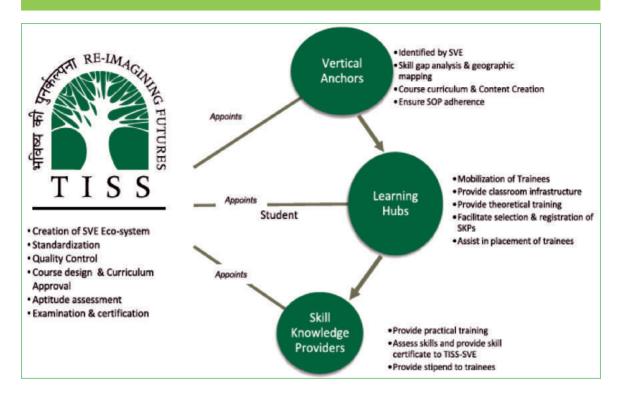
Through this project we have been able to establish a robust eco-system to offer a variety of vocational education programs in a cost effective manner. The mechanisms for quality control and assessment are also in place. It can be developed as a National Vocational University with more resources for expansion.

OVERVIEW OF SVE PROGRESS

VERTICAL COUNT = 19

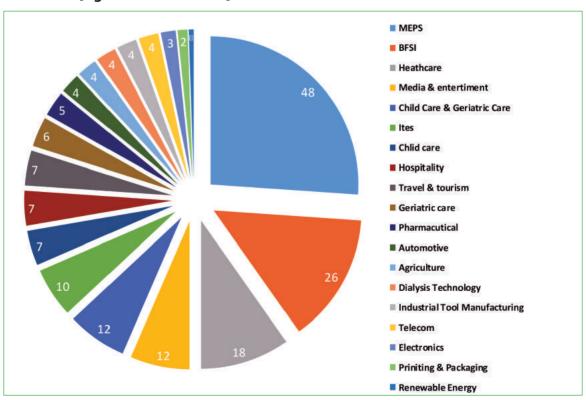
- 1. AGRICULTURE
- 2. AUTOMOTIVE
- 3. BFSI [Banking, Financial Services & Insurance]
- 4. CHILDCARE
- 5. DIALYSIS TECHNOLOGY
- 6. **ELECTRONICS**
- 7. GERIATRIC CARE
- 8. HEALTHCARE
- 9. HOSPITALITY
- 10. INDUSTRIAL SAFETY
- 11. INDUSTRIAL TOOL MANUFACTURING
- 12. ITeS [Information Technology Enabled Services]
- 13. MANAGEMENT, ENTREPRENEURSHIP & PROFESSIONAL SKILLS
- 14. MEDIA & ENTERTAINMENT
- 15. PHARMACEUTICALS
- 16. PRINTING & PACKAGING
- 17. RENEWABLE ENERGY
- 18. TELECOM
- 19. TRAVEL & TOURISM

TISS-SVE PARTNERSHIP MODEL

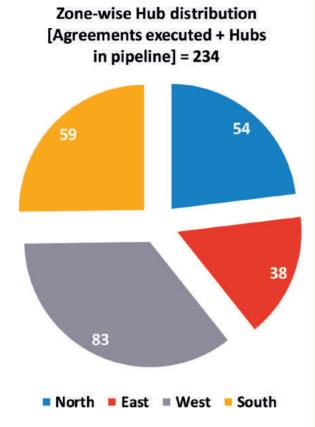


VERTICAL-WISE HUB COUNT = 184

Total Hubs [Agreement Executed] = 184



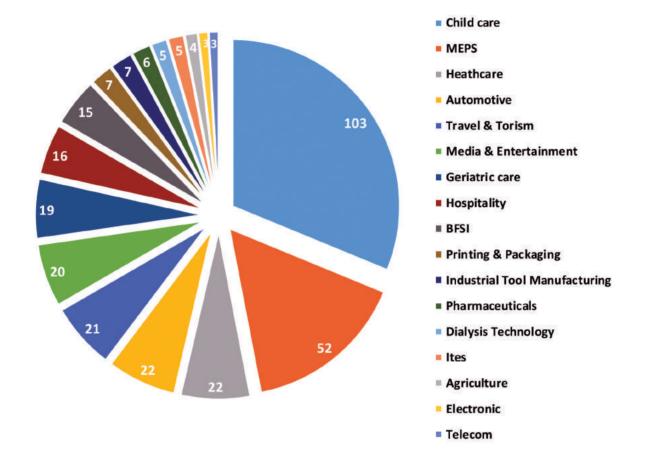
HUB COVERAGE – PAN INDIA = 234



Location-wise distribution			
North	zone		
Delhi	28		
Uttar Pradesh	13		
Rajasthan	8	54	
Punjab & Haryana	3	34	
Uttarakhand	1		
J & K	1		
East :	zone		
Kolkata	11		
Bihar	10		
Assam	8	20	
West Bengal	5	38	
Orissa	4		
Jharkhand	2		
West	zone		
Mumbai	35		
Maharashtra	17		
Gujarat	15	83	
Madhya Pradesh	9	03	
Chattisgarh	5		
Goa	2		
South	zone		
Chennai	7		
Kerala	18		
Karnataka	18	E0.	
Andhra Pradesh	8	59	
Tamil Nadu	6		
Pondicherry	2		
GRAND TOTAL		234	

SKILL KNOWLEDGE PROVIDERS = 330

Total SKPs = 330



SOME OF OUR SKPs

AUTOMOTIVE







PHARMACEUTICALS







INDUSTRIAL TOOL MANUFACTURING









SOME OF OUR SKPs

ELECTRONICS





DIALYSIS TECHNOLOGY





MEPS







SOME OF OUR SKPs

HEALTHCARE



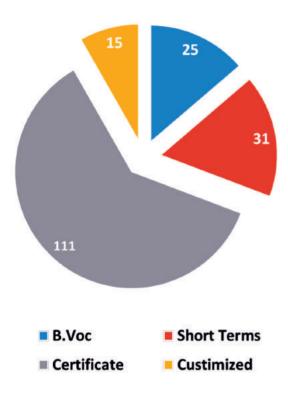
HOSPITALITY





& MANY MORE

COURSES COUNT



Sr. No	Vertical	Total
1	Agriculture	7
2	Automotive	5
3	BFSI	13
4	Child Care	2
5	Dialysis Technology	1
6	Electronics	2
7	Geriatric Care	1
8	Healthcare	15
9	Hospitality	23
10	Industrial Safety	6
11	Industrial Tool Manufacturing	13
12	ITeS	11
13	MEPS	27
14	Media & Entertainment	29
15	Pharmaceuticals	9
16	Printing & Packaging	2
17	Renewable Energy	2
18	Telecom	1
19	Travel & Tourism	13
	TOTAL	182

STUDENT COUNT

Vertical	B.Voc. (Current Sem Count)	Short term	Certificate	Customised	Total Active
Agriculture	65	0	0	0	65
Automotive	141	0	114	0	255
B F S I (Core Banking And Financial Services)	55	81	67	0	203
Child Care	478	0	0	0	478
Dialysis Technology	240	0	0	0	240
Electronics	776	0	0	0	776
Geriatric Care	0	225	0	0	225
Healthcare	247	105	0	0	352
Healthcare	0	111	0	0	111
Hospitality	132	0	0	0	132
Industrial Safety	0	0	0	0	0
Industrial Tool Manufacturing	278	0	0	0	278
Information Technology Enabled Services	7	21	0	0	28
Management & Entrepreneurship And Professional Skills	210	523	15	0	748
Media And Entertainment	35	0	22	546	603
Pharmaceutical	735	0	0	0	735
Printing And Packaging	15	0	0	12	27
Renewable Energy	0	0	0	0	0
Telecom	12	0	0	0	12
Travel And Tourism	57	11	8	0	76
TOTAL	3483	1056	226	558	5344

Around 3202 students have completed their courses with us.

Examination

	TOTAL STUDENTS APPEARED	PASS	FAIL	DROPOUT	NOT COMPLETED	PASS RATE (%)
All Vertical	3,307	2,661	275	16	355	80.5%

TOTAL PASS OUT – 1ST YEAR & 2ND YEAR					
ALL VERTICALS COMBINED	ALL VERTICALS COMBINED DIPLOMA (1st Year) ADVANCE DIPLOMA (2nd Year)				
TOTAL	273				

^{1&}lt;sup>st</sup> batch of B. Voc in Dialysis Technology, B. Voc in Pharmaceutical Chemistry & B.Voc. in Industrial Tool Manufacturing to Graduate in 2017.

ANNEXURE A – COURSE LIST

Vertical		Course Name
1	Agriculture	B.Voc. in Agriculture
2	Automotive	B.Voc. in Automotive Manufacturing Technology
3		B.Voc. in Automobile Servicing
4	BFSI	B.Voc. in BFSI
5	Childcare	B.Voc. In Early Child Development
6		B.Voc. In Child Protection
7	Dialysis Technology	B.Voc. in Dialysis Technology
8	Electronics	B.Voc. in Electronic Manufacturing Services - Mobile Phone
9	Healthcare	B.Voc. in Patient Care Management
10		B.Voc. in Medical Imaging Technology
11	Hospitality	B.Voc. in Hospitality Management
12		B.Voc. in Hotel Management
13	Industrial Tool Manufacturing	B.Voc. in ITM
14		B.Voc. in Production Technology
15	Media & Entertainment	B.Voc. in Graphics & Multimedia
16		B.Voc. in Radio Production & Planning
17		B.Voc. in Journalism
18	MEPS	B.Voc. in Sales & Marketing
19	Pharmaceuticals	B.Voc. Pharma Chemistry
20		B.Voc. Pharma Mfg.
21	Printing & Packaging	B.Voc. in Printing & Packaging Technology
22	Renewable Energy	B.Voc. in Renewable Energy
23	Telecom	B.Voc. in Telcom Products and Services Management
24	Travel & Tourism	B.Voc. in Travel and Tourism
25	Agriculture	Diploma in Agribusiness & Agricultural Finance
26		Diploma in Agrifarm Management
27		Diploma in Agri Marketing & Extension Management
28		Diploma in Food Processing
29	Automotive	Diploma in Automobile Servicing

Vertical		Course Name		
30		PG Diploma In Banking, Financial Markets & Insurance		
31		PG Diploma In Bank Credit Management		
32	BFSI	PG Diploma in Markets, Banking & Operations		
33		PG Diploma in Global Markets, Banking & Operations		
34		Diploma in Life Insurance - Sales & Operations		
35	Geriatric Care	Diploma in Geriatric Care		
36	Dialysis Technology	Diploma in Dialysis Technology		
37		Diploma in Medical Lab Technology		
38		Diploma in X-Ray Technology & ultra-sound assistance		
39		Diploma in CT & MRI Technology		
40		Diploma in Dental Chair Assistance		
41		Diploma in Opthalmic Assistance		
42	Healthcare	Diploma in Operation Theatre Technology		
43		Diploma in Paediatric Assistance		
44		PG Diploma in Healthcare Operation Management		
45		PG Diploma in Healthcare Counselling		
46		Diploma in Trauma Care		
47		PG Diploma in Emergency Medical Services		
48		Certificate & Diploma in ITM (SSLC)		
49	Industrial Tool Manufacturing	Advanced Diploma In Shop Floor Manufacturing		
50		Post Graduate Diploma In Industrial Tool Manufacturing		
51	ITES	Diploma in Computer Applications		
52	MEDC	PGD HR & Admin		
53	MEPS	PGD Sales & Marketing		
54		Certificate course in Tour operations		
55	Travel & Tourism	PG Certificate program in Destination Marketing		
56		PG Diploma in Tour Operations		
57	Agriculture	Certificate course in dairy farmer		
58		Certificate course in tractor operator		
59		Certificate course on soil testing and soil analysis		
60		Certificate Course in Automobile Servicing		
61	Automotive	Certificate Course in Life Skills		

	Vertical	Course Name
62		Certificate Course In Banking & Banking Operations
63		Certificate Course In Indian Financial Markets
64		Certificate Course In Trade Life Cycles Of Financial Products
65	BFSI	Certificate course in Priority Sector Lending Skills
66		Certificate course in Finance for Non-Finance Executive
67		Certificate course in Small Finance Bank Executives
68		Certificate course in Retail Banking Executives
69		Certificate course in Payments Bank Executives
70	Electronics	Certificate Course in Refrigeration and Airconditioning
71	Healthcare	Certificate in Community Health Worker
72	пеаннсаге	Certificate in Phlebotomy Technician
73		Driver to Chauffer
74		Corporate Guest Service
75		Winning thru' Customer Delight
76		Cafeteria Food Service Operations
77		F&B Service Excellence (for Restaurants)
78		Bar Tending Basics
79		Banquetting
80		Bakery Basic
81		3 & 5 Course Menu Preparation & Presentation
82		Making a Room
83	Hospitality	Flower Arrangement & Room Decoration
84		Laundry
85		Front Office Management
86		Food Safety & Hygiene
87		Bar Tending – Advanced
88		F&B Service
89		Restaurant Management
90		QSR Unit Management
91		Bakery Advanced
92		Housekeeping
93		Foundation Course in Food and Beverage Service

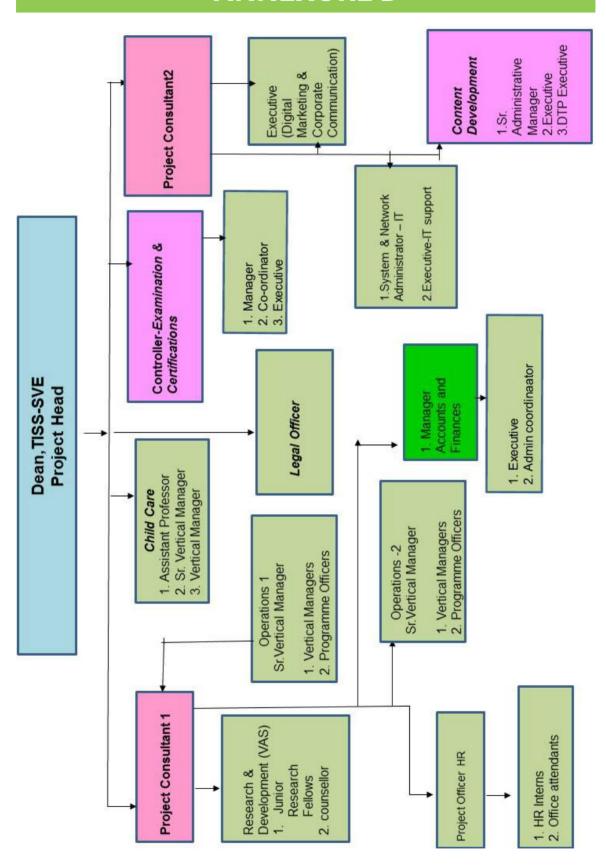
Vertical		Course Name	
94	Industrial Safety	Foundation Course In Safe Operations In Hazardous Atmospheres	
95		Skill Enhancement Course In Hazardous Area Classification	
96		Skill Enhancement Course For Inspection Of Hazardous Area Installations	
97		Skill Enhancement Course In Maintenance Of Hazardous Area Installations	
98		Skill Enhancement Course For Designing Hazardous Area Installations	
99		Skill Enhancement Course For Auditing Hazardous Area Installations	
100		Certificate Course In Computer Aided Design	
101		Certificate Course In Computer Aided Manufacturing	
102	Industrial Tool Manufacturing	Certificate Course In Computer Numeric Control Electrical Discharge Machining & Wirecut	
103		Certificate Course In Computer Numeric Control Programming & Machining	
104		Certificate Course In Computer Numeric Control Programming And Machining (with Computer Aided Manufacturing)	
105		Certificate Course In Coordinate Measuring Machine	
106		Certificate Course In Metrology	
107		Certificate Course in Desktop Publishing (300hrs)	
108		Certificate Course in Core Java Programming	
109		Certificate Course in Web Designing	
110		Certificate course in C & C++	
111		Certificate course in Database Mgt	
112	ITeS	Certificate course in software testing & project Mgt	
113		Certificate course in VB.Net	
114		Certificate course in windows based mobile app development	
115		Certificate course in android based mobile app development	
116		Certificate Course in Recruitment Management	
117	MEPS	Certificate Course in Payroll Management	

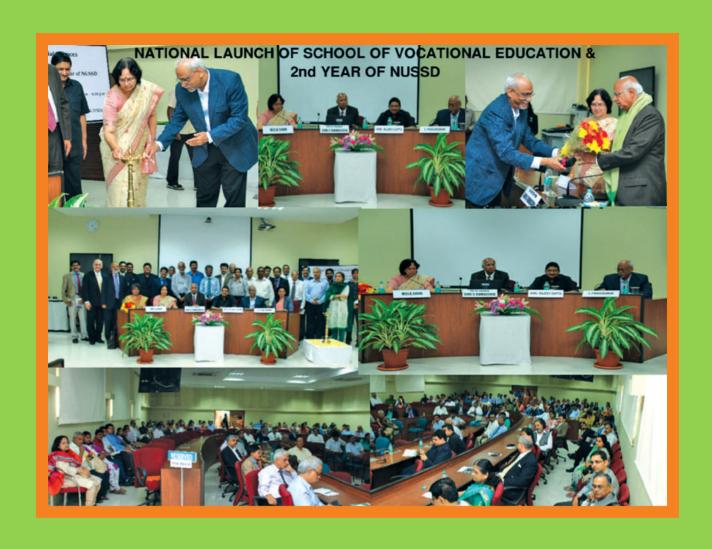
Vertical		Course Name	
118		Certificate Course in Lifeskills	
119		Certificate Course in Digital Marketing	
120		Certificate Course in Training the Trainer	
121		Certificate Course in Instructional Design	
122		Certificate Course in Interviewing Skills	
123		Certificate Course in Administration Management	
124		Certificate Course In Event Management	
125		Certificate Course In Animation Arts	
126		Certificate Course In Digital Marketing	
127		Certificate Course In Advertisement Management	
128		Foundation Course in Audio Visual	
129		Certificate Course In Videography	
130	Media & Entertainment	Certificate Course In Copywriting	
131		Advance Certificate Course In Media Marketing, Planning & Buying	
132		Advance Certificate Course In Print & Journalism	
133		Advance Certificate Course In Web Design	
134		Certificate Course In Corel Draw	
135		Certificate Course In Photoshop	
136		Certificate Course In Public Relation	
137		Certificate Course In Disk Jockey	
138		Certificate Course in Anchoring / Newsreading / Vjing	
139		Certificate Course in Radio Jockey & Voiceover	
140		Advance Certificate Course In Public Relation	
141		Foundation Course for Pharmaceutical Mfg.	
142		Certificate Course In Clinical Research	
143		Certificate Course In Good Manufacturing Practices	
144	Pharmaceuticals	Certificate Course In Housekeeping	
145		Certificate Course In Logistics	
146		Certificate Course In Quality Assuarance And Quality Control	
147		Certificate Course In Regulatory Affairs	
148		Certificate Course In Asean Regulatory Affairs	

Vertical		Course Name	
149	Telecom	Customer Care Executive – call centre	
150		Customer Care Executive –Relationship centre	
151		Customer Care Executive –Repair centre	
152		Field Sales Executives	
153		Store Telecom promotion	
154	Travel & Tourism	Certificate Course in Inbound / OutBound Tour Operations	
155		Certificate Course in Tourist friendly drivers	
156		Certificate Course in Travel & Tourism Sales	
157		Basic Tour operations	
158		Basic selling skills in Travel & Tourism	
159		Certificate course in Medical & wellness Tourism	
160		Certificate course in Sustainable eco-tourism projects	
161		Certificate course in MICE tourism	
162		Certificate course in Cultural / tourism ambassadors	

20 Skill Enhancement courses were offered as per demand taking the total course count to 182.

ANNEXURE B





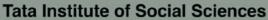














School of Vocational Education Hub Partners Meet Child Care and Geriatric Care

21st - 22nd February, 2017





















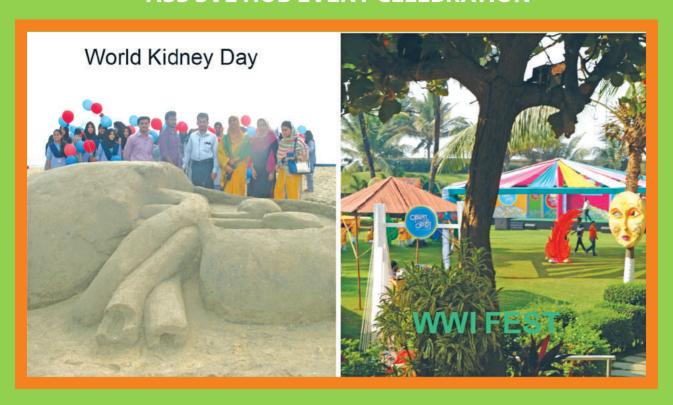








TISS SVE HUB EVENT CELEBRATION





SVE in NEWS







the growth of vocational education in India



AINED TO HELP AGED

Development Training, Tata Institute of Social Sciences (TISS) talks to Monarose Sheila Pereira about their Diploma in Geriatric Care

« MENTOR'S DESI





Earn while you learn at **TISS SVE programmes**

ata Institute of Social Science, School of vocational education (TISS SVE) has started issuing application forms for its July 2016 batch. The application forms are available in major cities. The institute will offer bachelor degrees and diplomas in the fields of Automotive Manufacturing, Manufacturing Technology, Pharmaceutical Manufacturing, Sales & Marketing, HR & Admin, Sal TISS has set up the School of Social Sciences (SVE) to improve the lives of the disadvantaged and marginalized youth through appropriate vocational training programmes.

All courses are offered in a work integrated training mode where most students get a stipend for the work they do. So it is an 'Earn while you Learn' model. More emphasis is on practical training (60%) as compared to the classroom teaching (40%). Also, it offers a costeffective model as there is no investment in infrastructure, equipment's, labs etc.

For details, visit www.tiss.edu/admissions. or call (022) 25525000 for details.

Employable skills

The Tata Institute of Social Science. School of Vocational Education announced admission for its July intake. Application will be opened across cities like Mumbai, Pune, Delhi, Kolkata, Guwahati, Noida Chennai, and Bangalore, etc. The institute will offer Bachelor degrees and diplomas in the fields of agriculture, banking and finance, food processing, and human resource, geriatric care, food processing, medical lab technology, etc. "There is major shortage of skilled manpower and most countries are trying to increase the number of workers that



are needed by different industries as well as service sectors. In India because of the demographic dividend, it is all the more necessary to ensure that our younger generation gets education in employable skills. Only 20 per cent of the graduates from the traditional education streams are employable and the rest need to acquire additional qualification to get a job" said Neela Dabir, dean, Tata Institute of Social Science, School of Vocational Education. The vision is to create an ecosystem that would bring back the dignity of labour for blue collar streams of work and provide sustainable sources of income for the marginalised youth in the country Last date of submission is 6 Jul

You name it, institutes in city have a course for it

From homemaker to a professional career





School of Vocational Education Tata Institute of Social Sciences

(A Deemed University as under Section 3 of the University Grants Commission Act 1956)

V. N Purav Marg, Deonar, Mumbai 400 088

Tel. 91 22 2552 5601, 02, 03 • Fax 91 22 2552 5050 • www.sve.tiss.edu