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Toolkit for academic staff to support service-learning by students

Executive summary

Service-learning combines learning with the community service in order to provide the meaningful learning experience while managing real-life problems and meeting societal needs. It must, however, be stressed that service learning is not simply academic credit for volunteer work and service to society - the emphasis is on learning and specific learning outcomes are to be achieved by students. In case of the ENHANCE universities, a well-designed service learning should include some non-trivial engineering or technology related component.

In our report, we review the concepts of service learning presented in the literature, show several examples of service learning taking place at the ENHANCE universities and propose recommendations that could be used when developing joint ENHANCE service learning activities offered to our students.

We see service learning as either the part of curriculum or as the extracurricular activity. However, as stated earlier, in either case the learning outcomes should be clearly defined. In most cases these learning outcomes focus on skills and social competences with the limited, if any, knowledge component (however, some theoretical knowledge both on the subject matter of the activity and pedagogy related to service learning, might be required). A relevant procedure to assess the student's learning outcomes should also be developed and implemented, especially in the case when the service oriented activity is an obligatory or elective component of the curriculum.

The assessment of service learning outcomes requires a well thought approach. A written examination adopted for typical components of the curriculum (typical courses) is unlikely to be useful in this case. That is why, the portfolio submitted by a student can serve the purpose of student's assessment. This portfolio may contain various materials documenting the student's activity, including multimedia materials such as photos, audio or video-recordings, the opinions of beneficiaries and the student's report containing his/her self-assessment and reflection on the educational experience gained.

We propose to combine the concept of service learning with the ENHANCE micro-credential framework. This means that the student engagement and his/her learning experience can be recognised and certified in the form of a micro-credential (the ENHANCE micro-credential if that service learning activity is developed and offered jointly by the partners of the ENHANCE Alliance). In the ENHANCE micro-credentials framework, badges are a primary type of micro-credentials awarded for service learning.

Awarding badges is particularly useful when service learning is an extracurricular activity. In this case the badge certifies the student's engagement in service for community. However, badges can be also awarded for service learning which is the part of the student's curriculum. In this case, the relevant document (confirming the badge) should also include, along with the description of the learning outcomes, the number of ECTS points assigned on the basis of the estimation of the student workload.

The significant part of the report is devoted to presenting the particular examples of service learning taking place at the ENHANCE universities. Each case is described by specifying the general objective of the activity, the participants (the selected group of students), the method used, the timing (duration and schedule of the activities), the external partner

involved in the organisation of the activities, the details of the service implemented, the learning outcomes, and, in some cases, the opinions of the participants.

The presented cases are aimed to serve as an inspiration and the examples of good practice that could support the development and implementation of the service learning concept. The workshop that took place on 27th April 2022 in Göteborg during the ENHANCE Staff Week (as the part of the Innovative Learning Environments track coordinated by WUT) was an essential step in the development process of the common approach and joint offer of service learning activities by the ENHANCE universities. Fifteen people representing the ENHANCE universities participated in this event.

The results of this workshop, presented in the last section of our report, include, among other things, the expanded concept of the service-learning approach. At the same time, the recommendations on how to further the development of service learning activities within the ENHANCE universities are formulated as the outcome of the more in-depth discussion and personal experience of the workshop participants. Some ideas, guidelines and example practices for building a follow-up strategy for our society-centered initiatives are also highlighted .

This report can be seen as the “tool” that could be used when developing joint ENHANCE service learning activities and addressing the pressing social challenges such as supporting the Ukrainian community, organising events promoting science, or engaging in activities related to gender and equality issues.

Toolkit for academic staff to support service-learning by students

Kurzdarstellung

Service-Learning verbindet das Lernen mit dem Dienst an der Gemeinschaft, um eine sinnvolle Lernerfahrung zu ermöglichen und gleichzeitig reale Probleme zu lösen und gesellschaftliche Bedürfnisse zu erfüllen. Es muss jedoch betont werden, dass Service-Learning nicht einfach nur eine akademische Anerkennung für ehrenamtliches Engagement und Dienst an der Gesellschaft ist - der Schwerpunkt liegt auf dem Lernen und den spezifischen Lernergebnissen, die von den Studierenden erzielt werden sollen. Im Falle der ENHANCE-Universitäten sollte ein gut konzipiertes Service Learning eine nicht-triviale ingenieurwissenschaftliche oder technologische Komponente beinhalten.

In unserem Bericht geben wir einen Überblick über die in der Literatur vorgestellten Konzepte des Service Learning, zeigen mehrere Beispiele für Service Learning an den ENHANCE-Hochschulen und schlagen Empfehlungen vor, die bei der Entwicklung gemeinsamer ENHANCE-Service-Learning-Aktivitäten für unsere Studierenden genutzt werden könnten.

Wir sehen Service Learning entweder als Teil des Lehrplans oder als extracurriculare Aktivität. Wie bereits erwähnt, sollten jedoch in beiden Fällen die Lernergebnisse klar definiert sein. In den meisten Fällen konzentrieren sich diese Lernergebnisse auf Fertigkeiten und soziale Kompetenzen und beinhalten, wenn überhaupt, nur eine begrenzte Wissenskomponente (ein gewisses theoretisches Wissen sowohl über den Gegenstand der Aktivität als auch über die Pädagogik im Zusammenhang mit Service Learning kann jedoch erforderlich sein). Ein entsprechendes Verfahren zur Bewertung der Lernergebnisse der Studierenden sollte ebenfalls entwickelt und umgesetzt werden, insbesondere dann, wenn die Service orientierte Tätigkeit eine Pflicht- oder Wahlkomponente des Lehrplans ist.

Die Bewertung von Lernergebnissen des Service Learning erfordert einen gut durchdachten Ansatz. Eine schriftliche Prüfung, die bei typischen Bestandteilen des Lehrplans (typische Kurse) durchgeführt wird, ist in diesem Fall wahrscheinlich nicht sinnvoll. Aus diesem Grund kann das von den Studierenden eingereichte Portfolio zur Bewertung herangezogen werden. Dieses Portfolio kann verschiedene Materialien enthalten, die die Tätigkeit des Studierenden dokumentieren, einschließlich multimedialer Materialien wie Fotos, Audio- oder Videoaufzeichnungen, Stellungnahmen von Begünstigten und den Bericht des Studierenden, der seine Selbsteinschätzung und Reflexion über die gesammelten Lernerfahrungen enthält.

Wir schlagen vor, das Konzept des Service Learning mit dem ENHANCE Micro-Credential Rahmenkonzept zu kombinieren. Das bedeutet, dass das Engagement der Studierenden und ihre Lernerfahrungen in Form eines Micro-Credentials anerkannt und zertifiziert werden können (der ENHANCE-Micro-Credential, wenn diese Service-Learning-Aktivität von den Partnern der ENHANCE Alliance gemeinsam entwickelt und angeboten wird). Im ENHANCE-Microcredentials-Rahmenkonzept sind Badges eine primäre Art von Microcredentials, die für Service Learning vergeben werden.

Die Vergabe von Badges ist besonders nützlich, wenn Service Learning eine extracurriculare Aktivität ist. In diesem Fall bescheinigt das Badge das Engagement der*des Studierenden im Dienst an der Gemeinschaft. Badges können jedoch auch für Service Learning verliehen werden, das Teil des Lehrplans der*des Studierenden ist. In diesem Fall sollte das

entsprechende Dokument (zur Bestätigung des Badges) neben der Beschreibung der Lernergebnisse auch die Anzahl der ECTS-Punkte enthalten, die auf der Grundlage der Schätzung des studentischen Arbeitsaufwands vergeben werden.

Der größte Teil des Berichts ist der Vorstellung ausgewählter Beispiele für Service Learning an den ENHANCE-Hochschulen gewidmet. Jeder Fall wird beschrieben, indem das allgemeine Ziel der Aktivität, die Teilnehmer*innen (die ausgewählte Gruppe von Studierenden), die angewandte Methode, der Zeitplan (Dauer und Zeitplan der Aktivitäten), der externe Partner, der an der Organisation der Aktivitäten beteiligt war, die Einzelheiten des durchgeführten Dienstes an der Gesellschaft, die Lernergebnisse und in einigen Fällen die Meinungen der Teilnehmer*innen angegeben werden.

Die vorgestellten Fälle sollen als Inspiration und Beispiele guter Praxis dienen, die die Entwicklung und Umsetzung des Service Learning-Konzepts unterstützen können. Der Workshop, der am 27. April 2022 in Göteborg während der ENHANCE Staff Week (als Teil des von der WUT koordinierten Tracks Innovative Learning Environments) stattfand, war ein wesentlicher Schritt im Entwicklungsprozess des gemeinsamen Ansatzes und des gemeinsamen Angebots von Service-Learning-Aktivitäten durch die ENHANCE-Hochschulen. Fünfzehn Personen, die die ENHANCE-Hochschulen vertraten, nahmen an dieser Veranstaltung teil.

Zu den Ergebnissen dieses Workshops, die im letzten Abschnitt unseres Berichts vorgestellt werden, gehört unter anderem das erweiterte Konzept des Service-Learning-Ansatzes. Gleichzeitig werden Empfehlungen formuliert, wie die Entwicklung von Service-Learning-Aktivitäten innerhalb der ENHANCE-Hochschulen vorangetrieben werden kann, als Ergebnis der vertieften Diskussionen und persönlichen Erfahrungen der Workshop-Teilnehmer*innen. Einige Ideen, Leitlinien und Praxisbeispiele für die Entwicklung einer Nachfolgestrategie für unsere gesellschaftszentrierten Initiativen werden ebenfalls hervorgehoben.

Dieser Bericht kann als "Werkzeug" betrachtet werden, das bei der Entwicklung gemeinsamer ENHANCE-Service-Learning-Aktivitäten und der Bewältigung dringender gesellschaftlicher Herausforderungen wie der Unterstützung der ukrainischen Gesellschaft, der Organisation von Veranstaltungen zur Förderung der Wissenschaft oder der Durchführung von Aktivitäten im Zusammenhang mit Geschlechter- und Gleichstellungsfragen eingesetzt werden kann.

Toolkit per il personale accademico a supporto del Service Learning degli studenti Sintesi

Il Service Learning combina la didattica con il servizio alla comunità, per un'esperienza ricca di significato in cui l'apprendimento avviene tramite la gestione problemi di vita reale e contribuendo a soddisfare i bisogni della società. È tuttavia da sottolinearsi che il Service Learning non va intrapreso solamente per accumulare crediti formativi con l'attività di volontariato e servizio sociale: ha infatti specifiche finalità didattiche e prevede che gli studenti conseguano specifici risultati di apprendimento. Nelle università ENHANCE, la buona strutturazione del Service Learning prevede anche importanti componenti di ingegneria e tecnologia.

Nella nostra relazione esaminiamo il concetto di Service Learning come presentato nella letteratura, riportiamo vari esempi di attività di Service Learning presso le università ENHANCE e proponiamo raccomandazioni per lo sviluppo di attività congiunte di Service Learning nell'ambito di ENHANCE.

Le attività di Service Learning possono essere curricolari o extracurricolari, e, come già detto, in ambo i casi è necessario definire con chiarezza i risultati di apprendimento. Nella maggioranza dei casi i risultati si concentrano su abilità e competenze sociali con una componente di conoscenza limitata, se non addirittura assente (potrebbero tuttavia essere necessarie alcune conoscenze teoriche sia sul tema dell'attività sia sulla pedagogia del Service Learning). È necessario sviluppare e implementare una procedura idonea alla valutazione dei risultati di apprendimento dello studente, soprattutto quando l'attività orientata al servizio sia componente obbligatoria o facoltativa del curriculum.

La valutazione dei risultati del Service Learning richiede un metodo debitamente ponderato. Sembra poco utile in questo contesto un esame scritto sul modello di quelli adottati per le componenti tipiche del curriculum (corsi tipici); a maggior ragione, quindi, il portafogli presentato dal singolo studente può essere funzionale alla valutazione dello studente stesso. Il portafogli può contenere vari materiali che documentano l'attività dello studente, tra cui materiali multimediali come foto, registrazioni audio o video, il parere dei beneficiari e la relazione dello studente con la sua autovalutazione e le sue riflessioni sull'esperienza formativa maturata.

Ci proponiamo di combinare il concetto di Service Learning con il quadro delle micro-credenziali di ENHANCE. Questo significa la possibilità di riconoscere e certificare l'impegno dello studente e la sua esperienza di apprendimento con delle micro-credenziali (la micro-credenziale ENHANCE se l'attività di Service Learning è organizzata e offerta congiuntamente dai partner di ENHANCE Alliance). Nel quadro delle micro-credenziali ENHANCE, i badge sono micro-credenziali primarie per il Service Learning.

L'assegnazione dei badge è particolarmente utile quando il Service Learning è un'attività extracurricolare. In questo caso il badge attesta l'impegno dello studente nel servizio alla comunità. Si possono comunque assegnare badge anche per attività di Service Learning curricolari; in questo caso il relativo documento (di conferma del badge) riporterà, oltre alla descrizione dei risultati di apprendimento, anche il numero di CFU assegnati secondo il carico di lavoro stimato per lo studente.

La parte principale della relazione è dedicata alla presentazione di specifici esempi di Service Learning in atto nelle università ENHANCE. Ogni caso è descritto specificando l'obiettivo generale dell'attività, i partecipanti (il gruppo di studenti selezionato), il metodo

utilizzato, i tempi (durata e programma delle attività), il partner esterno coinvolto nell'organizzazione delle attività, i dettagli del servizio implementato, i risultati di apprendimento e, in alcuni casi, il parere dei partecipanti.

I casi presentati si propongono come fonte d'ispirazione ed esempi di buone prassi a supporto dello sviluppo e dell'attuazione del concetto di Service Learning. Il workshop tenutosi il 27 aprile 2022 a Göteborg durante l'ENHANCE Staff Week (nell'ambito del percorso Innovative Learning Environments coordinato dalla WUT) è stato un passo essenziale nel processo di sviluppo di un metodo comune e di un'offerta congiunta di attività di Service Learning da parte delle università ENHANCE. All'evento hanno partecipato quindici rappresentanti delle università ENHANCE.

I risultati del workshop, presentati nell'ultima sezione della nostra relazione, comprendono anche un approccio più ampio al concetto di Service Learning. Le raccomandazioni su come promuovere lo sviluppo delle attività di Service Learning nelle università ENHANCE sono l'esito di un dibattito approfondito e dell'esperienza personale dei diversi partecipanti al workshop. Si evidenziano inoltre idee, linee guida ed esempi di prassi per una strategia di follow-up per le nostre iniziative incentrate sulla società.

La presente relazione può considerarsi come un "tool" per lo sviluppo di attività congiunte di Service Learning nell'ambito di ENHANCE e per affrontare sfide sociali urgenti quali il sostegno alla comunità ucraina, l'organizzazione di eventi di promozione delle scienze e l'impegno in attività relative a questioni di genere e uguaglianza.

Verktøysett for vitenskapelig ansatte for å støtte tjenestelæring av studenter

Sammendrag

Tjenestelæring kombinerer læring og samfunnsoppdrag for å gi en meningsfylt læringsopplevelse i tillegg til å adressere problemer fra det virkelige liv og oppfylle samfunnsbehov. Det må imidlertid understrekes at tjenestelæring ikke bare er akademisk utbytte for frivillig arbeid og tjeneste for samfunnet – det er viktig å vektlegge læring og konkret læringsutbytte for studenter. Ved ENHANCE-universitetene bør en godt designet tjenestelæring inkludere noen komponenter som ikke er ingeniør- eller teknologirelatert.

I vår rapport gjennomgår vi begrepene tjenestelæring presentert i litteraturen, viser flere eksempler på tjenestelæring som foregår ved ENHANCE-universitetene og foreslår anbefalinger som kan brukes når vi utvikler felles ENHANCE-tjenestelæringsaktiviteter som skal tilbys studentene våre.

Vi vurderer tjenestelæring enten som del av læreplanen eller som en ekstrakurrikulær aktivitet, men som tidligere nevnt, bør læringsutbyttet i begge tilfeller være klart definert. I de fleste tilfeller fokuserer disse læringsutbyttene på ferdigheter og sosial kompetanse med en begrenset (eller ikke-eksisterende) kunnskapskomponent (men det kan imidlertid være nødvendig med noe teoretisk kunnskap både om emnet for aktiviteten og pedagogikken knyttet til tjenestelæring). En relevant prosedyre for å vurdere studentens læringsutbytte bør også utvikles og gjennomføres, spesielt i tilfeller der tjenesteorientert aktivitet er en obligatorisk eller valgfri del av pensum.

Vurderinger av tjenestelæringsresultater krever en gjennomtenkt tilnærming. Skriftlig eksamen (for typiske emner) er sannsynligvis ikke den mest nyttige vurderingsformen i dette tilfellet, og en mappevurdering kan kanskje være mer formålstjenlig. En slik mappe kan inneholde ulikt materiale som dokumenterer studentens aktivitet, inkludert bilder, lyd- eller videoopptak, mottagernes egne oppfaninger og en studentrapport som inneholder egenvurdering og refleksjon over oppnådd pedagogisk erfaring.

Vi foreslår å kombinere begrepet tjenestelæring med rammeverket for ENHANCE microcredentials. Dette betyr at studentens engasjementet og læringserfaring kan dokumenteres og sertifiseres i form av en microcredential (ENHANCE-microcredential hvis aktiviteten utvikles og tilbys av partnerne i ENHANCE Alliance). Innenfor rammeverket for ENHANCE microcredentials er utdanningsdisbevis («badges») en primær type microcredential som tildeles for tjenestelæring.

Tildeling av utdanningsdisbevis er spesielt nyttig når tjenestelæring er en utenomfaglig aktivitet, ettersom beviset vil dokumentere studentens engasjement i tjeneste for fellesskapet. Bevis kan imidlertid også tildeles for tjenestelæring som er del av studentens utdanningsplan. I slike tilfeller bør bekreftelsen på utdanningsbeviset inkludere en beskrivelse av læringsutbyttet, antall studiepoeng tildelt basert på estimert arbeidsbelastning.

Hoveddelan av rapporten er viet til å presentere eksemplene på tjenestelæring som foregår ved ENHANCE-universitetene. Hvert tilfelle beskrives ved å spesifisere det generelle målet for aktiviteten, deltakerne (den valgte gruppen studenter), metoden som brukes, varighet og tidsplan for aktivitetene, den eksterne partneren som er involvert i organiseringen av aktivitetene, detaljene i tjenesten, læringsutbyttet og i noen tilfeller deltakernes egne meninger.

De beskrevne aktivitetene skal fungere som inspirasjon og eksempler på god praksis som kan støtte utvikling og implementering av tjenestelæringskonseptet. Workshopen som ble arrangert i april 2022 i Göteborg som del av ENHANCE Staff Week (innenfor Innovative Læringsmiljø-sporet koordinert av WUT) var et viktig skritt i utviklingsprosessen for felles tilnærming og felles tilbud om tjenestelæringsaktiviteter ved ENHANCE-universitetene. Femten representanter fra ENHANCE-universitetene deltok i dette arrangementet.

Resultatene av workshopen som er presentert i den siste delen av rapporten, inkluderer blant annet det utvidede tjenestelærings-konseptet. Samtidig er anbefalingene om hvordan man kan fremme utviklingen av tjenestelæringsaktiviteter innen ENHANCE-universitetene formulert som resultat av den mer dyptgående diskusjonen og den personlige opplevelsen til workshopdeltakerne. Noen ideer, retningslinjer og eksempel på praksis for å opparbeide en oppfølgingsstrategi for våre samfunnscentrerte initiativer er også notert.

Denne rapporten kan sees på som "verktøyet" som kan brukes når du utvikler felles ENHANCE-tjenestelæringsaktiviteter. Den adresserer presserende sosiale utfordringer som å støtte det ukrainske samfunnet, organisere arrangementer som fremmer vitenskap eller engasjement i aktiviteter knyttet til kjønns- og likestillingsspørsmål.

Zestaw narzędzi dla kadry akademickiej służący wspieraniu studentów w procesie service-learning

Streszczenie

Service learning (uczenie się przez zaangażowanie) łączy uczenie się z pracą na rzecz społeczności w celu osiągnięcia istotnych celów edukacyjnych przy jednoczesnym rozwiązywaniu problemów dotyczących życia codziennego i zaspokajania potrzeb społecznych. Należy jednak podkreślić, że *service learning* nie jest prostym rozliczeniem wolontariatu lub służby na rzecz społeczności – nacisk położony jest na uczenie się, a studenci powinni osiągać określone jego efekty. W przypadku konsorcjum ENHANCE dobrze zaprojektowany proces *service learning* powinien zawierać nietrywialny komponent związany z inżynierią lub technologią.

W niniejszym raporcie dokonujemy przeglądu koncepcji *service learning* przedstawionych w literaturze, pokazujemy kilka przykładów realizacji tych rozwiązań na uczelniach ENHANCE i proponujemy zalecenia do wykorzystania podczas opracowywania wspólnych działań związanych z *service learning* oferowanych studentom ENHANCE.

Service learning można traktować jako część programu studiów lub jako zajęcia pozaprogramowe. Jednak, jak wspomniano wcześniej, w obu przypadkach efekty uczenia się powinny być jasno określone. W większości przypadków efekty te skupiają się na umiejętnościach i kompetencjach społecznych z ograniczonym, jeśli w ogóle, składnikiem wiedzy (jednak może być wymagana pewna wiedza teoretyczna zarówno na temat przedmiotu działania, jak i pedagogiki związanej z *service learning*). Należy również opracować i wdrożyć odpowiednią procedurę oceny efektów uczenia się osiąganych przez studenta, zwłaszcza w przypadku, gdy działalność na rzecz społeczności jest obowiązkowym lub fakultatywnym elementem programu studiów.

Ocena efektów uczenia się uzyskanych w wyniku *service learning* wymaga dobrze przemyślanego podejścia. Egzamin pisemny przyjęty dla typowych przedmiotów raczej nie będzie w tym przypadku przydatny. Dlatego też do takiej oceny może posłużyć portfolio przesłane przez studenta. Portfolio może zawierać różne materiały dokumentujące działalność studenta, w tym materiały multimedialne, takie jak zdjęcia, nagrania audio lub wideo, opinie beneficjentów oraz opracowane przez studenta sprawozdanie zawierające samoocenę i refleksję na temat zdobytych umiejętności i doświadczenia.

Proponujemy połączenie koncepcji *service learning* z koncepcją nadawanych przez ENHANCE mikrokwalifikacji (mikropoświadczeń). Oznacza to, że zaangażowanie studenta i zdobyte umiejętności mogą być uznawane i certyfikowane w formie mikrokwalifikacji (mikrokwalifikacji ENHANCE, jeśli działanie związane z *service learning*, jest opracowywane i oferowane wspólnie przez partnerów konsorcjum ENHANCE). W strukturze mikrokwalifikacji ENHANCE podstawowym rodzajem mikrokwalifikacji przyznawanych za *service learning* są odznaki (badges)

Przyznawanie odznak jest szczególnie zalecane, gdy *service learning* jest realizowane jako zajęcia pozaprogramowe. W tym przypadku odznaka potwierdza zaangażowanie studenta na rzecz społeczności. Odznaki można jednak przyznawać również za *service learning* realizowane jako część programu studiów. W takim przypadku stosowny dokument (potwierdzający odznakę) powinien zawierać liczbę punktów ECTS przyznanych na podstawie oszacowania nakładu pracy studenta, a także opis osiągniętych efektów uczenia się.

Znaczna część raportu poświęcona jest przedstawieniu konkretnych przykładów *service learning* realizowanego na uczelniach ENHANCE. Każdy przypadek jest opisany poprzez określenie założeń, uczestników, zastosowanej metody, czasu (czasu trwania i harmonogramu zajęć), partnera zewnętrznego zaangażowanego w organizację działań, szczegółów zrealizowanych działań na rzecz społeczności, efektów uczenia się oraz, w niektórych przypadkach, opinii uczestników.

Zaprezentowane działania mają służyć zarówno jako inspiracja i jak przykłady dobrych praktyk, które mogłyby wesprzeć opracowanie i wdrożenie koncepcji *service learning*. Warsztaty, które odbyły się 27 kwietnia 2022 r. w Göteborgu podczas ENHANCE Staff Week (w ramach ścieżki Innowacyjne Środowiska Edukacyjne koordynowanej przez PW), były istotnym krokiem w procesie opracowania wspólnego podejścia i wspólnej oferty zajęć edukacyjnych przez uczelnie ENHANCE. Wzięło w nich udział piętnaście osób reprezentujących te uczelnie.

Wyniki tego warsztatu, przedstawione w ostatniej części naszego raportu, obejmują między innymi rozszerzoną koncepcję *service learning*. Zalecenia dotyczące dalszych działań związanych z *service learning* na uczelniach ENHANCE zostały sformułowane w wyniku dogłębnej dyskusji i osobistych doświadczeń uczestników warsztatów. Dokument dostarcza kilku cennych pomysłów, wskazówek i przykładowych praktyk dotyczących budowania strategii działań dla inicjatyw skupionych na społeczności.

Raport ten może być postrzegany jako „narzędzie”, które można wykorzystać podczas opracowywania wspólnych działań ENHANCE w zakresie *service learning*, służących rozwiązywaniu trudnych wyzwań społecznych, takich jak wspieranie społeczności ukraińskiej, organizowanie wydarzeń promujących naukę lub angażowanie się w działania związane z kwestią równości płci i zapewnieniem innych form równości.

Toolkit para el personal académico en apoyo del aprendizaje-servicio de los estudiantes

Resumen ejecutivo

El aprendizaje-servicio combina el aprendizaje con el servicio a la comunidad con el fin de proporcionar una experiencia práctica significativa al tiempo que se gestionan los problemas de la vida real y se satisfacen las necesidades de la sociedad. Sin embargo, hay que subrayar que el aprendizaje-servicio no es simplemente un crédito académico por el trabajo voluntario y el servicio a la sociedad, sino que el énfasis está en el aprendizaje mismo y en los resultados específicos que deben alcanzar los estudiantes. En el caso de las universidades ENHANCE, un aprendizaje de servicio bien diseñado debe incluir algún componente relevante relacionado con la ingeniería o la tecnología.

En nuestro informe, revisamos los conceptos de aprendizaje-servicio presentados en la documentación, mostramos varios ejemplos de aprendizaje-servicio que tienen lugar en las universidades ENHANCE y proponemos recomendaciones que podrían utilizarse a la hora de desarrollar actividades conjuntas de este tipo para ofrecerlas a nuestros estudiantes.

Consideramos el aprendizaje-servicio como parte del plan de estudios o como una actividad extracurricular. Sin embargo, como ya se ha dicho anteriormente, en cualquier caso, los resultados del aprendizaje deben estar claramente definidos. En general, estos resultados de aprendizaje se centran en las habilidades y las competencias sociales, con un componente de conocimientos limitado, si lo hay (sin embargo, podrían requerirse algunos conocimientos teóricos tanto sobre el tema de la actividad como sobre la pedagogía relacionada con el aprendizaje-servicio). También se debe desarrollar e implementar un procedimiento adecuado para evaluar los resultados de aprendizaje del estudiante, especialmente en el caso de que la actividad orientada al servicio sea un componente obligatorio o electivo del plan de estudios.

La evaluación de los resultados del aprendizaje-servicio requiere un enfoque sopesado. Es poco probable que un examen escrito aceptado para los componentes propios del plan de estudios (cursos característicos) sea útil en este caso. Por ello, el portafolio presentado por un estudiante puede servir para la evaluación del mismo. Este portafolio puede contener diversos materiales que documenten la actividad del estudiante, incluyendo materiales multimedia como fotos, grabaciones de audio o vídeo, las opiniones de los beneficiarios y el informe del estudiante que contenga su autoevaluación y reflexión sobre la experiencia educativa adquirida.

Nuestra propuesta es combinar el concepto de aprendizaje-servicio con el marco de microcredenciales ENHANCE. Esto significa que el compromiso del estudiante y su experiencia de aprendizaje pueden ser reconocidos y certificados en forma de una microcredencial (la microcredencial ENHANCE si esa actividad de aprendizaje-servicio es desarrollada y ofrecida conjuntamente por los socios de la Alianza ENHANCE). En el marco de las microcredenciales ENHANCE, las insignias son un tipo principal de microcredenciales que se otorgan para el aprendizaje-servicio.

La concesión de insignias es especialmente útil cuando el aprendizaje-servicio es una actividad extracurricular. En este caso, la insignia certifica el compromiso del alumnado con

el servicio a la comunidad. Sin embargo, también se pueden conceder insignias por el aprendizaje-servicio que forma parte del plan de estudios del alumnado. En este caso, el documento correspondiente (que confirma el distintivo) debe incluir, junto con la descripción de los resultados del aprendizaje, el número de ECTS asignados sobre la base de la estimación de la carga de trabajo del estudiante.

La parte significativa del informe presenta los ejemplos particulares de aprendizaje-servicio que tienen lugar en las universidades de ENHANCE. Cada caso se describe especificando el objetivo general de la actividad, los participantes (el grupo de estudiantes seleccionado), el método utilizado, el horario (duración y horario de las actividades), el socio externo implicado en la organización de las actividades, los detalles del servicio implementado, los resultados de aprendizaje y, en algunos casos, las opiniones de los participantes.

Los casos presentados tienen como objetivo servir de inspiración y ejemplo de buenas prácticas que pueden apoyar el desarrollo y la aplicación del concepto de aprendizaje-servicio. El taller que tuvo lugar el 27 de abril de 2022 en Gotemburgo durante la Staff Week de ENHANCE (como parte del tema de Entornos de Aprendizaje Innovadores coordinado por WUT) y fue un paso esencial en el proceso de desarrollo del enfoque común y la oferta conjunta de actividades de aprendizaje-servicio por parte de las universidades de ENHANCE. Quince personas en representación de las universidades ENHANCE participaron en este evento.

Los resultados de este taller, presentados en la última sección de nuestro informe, incluyen, entre otras cosas, el concepto ampliado del enfoque de aprendizaje-servicio. Además, las recomendaciones sobre cómo promover el desarrollo de las actividades de aprendizaje-servicio dentro de las universidades ENHANCE se formulan como resultado de un debate más profundo y la experiencia personal de los participantes en el taller. También se destacan algunas ideas, directrices y prácticas de ejemplo para construir una estrategia de seguimiento de nuestras iniciativas centradas en la sociedad.

Este informe puede considerarse como la "herramienta" que podría utilizarse a la hora de desarrollar actividades conjuntas de aprendizaje-servicio de ENHANCE y de abordar los retos sociales más apremiantes, como el apoyo a la comunidad ucraniana, la organización de eventos de promoción de la ciencia o la realización de actividades relacionadas con cuestiones de género e igualdad.

Verktyslåda för universitetslärare till stöd för studenters 'service-learning' Sammanfattning

Service-learning kopplar samman lärande med stöd till lokalsamhället för att erbjuda meningsfulla lärtillfällen samtidigt som verkliga problem hanteras och sociala behov tillgodoses.

Det ska framhållas att service-learning inte endast handlar om akademiska meriter för volontärinstatser och bidrag till samhället - fokus ligger på lärande och studenterna ska uppnå angivna lärandemål. När det gäller ENHANCE-universiteten ska en del icke-triviala ingenjör- eller teknikrelaterade komponenter ingå i väl utformad service-learning.

I vår rapport går vi igenom de service-learningkoncept som finns representerade i litteraturen och lyfter fram flera exempel på service-learning som bedrivs vid ENHANCE-universiteten samt föreslår rekommendationer som kan användas för utveckla ENHANCE gemensamma service-learningaktiviteter som kan erbjudas våra studenter.

Service-learning ska antingen ingå som en del av en kursplan eller programplan eller som aktiviteter utanför kurs- och programplaner. Som tidigare betonats ska lärandemålen i båda fallen vara väl definierade. I de flesta fall tar dessa lärandemål fasta på förmågor och social kompetens med en liten, om ens någon, kunskapskomponent (någon teoretisk kunskap om såväl ämnet för aktiviteten som pedagogiken relaterat till service-learning kan dock krävas). En relevant process för att bedöma om studenten uppnått lärandemålen behöver utvecklas och tas i bruk, särskilt när service-learningaktiviteten är en obligatorisk eller valbar del i en kurs- eller programplan.

Bedömningen om lärmålen för service-learning har uppnåtts kräver en väl genomtänkt ansats. Skriftlig examination anpassad för vanliga kursplansmoment (typiska kurser) är sannolikt inte användbara i de här fallen. Därför kan en portfolio som en student lämnar in fungera som metod för studentens självvärdering. En sådan portfolio kan innehålla en mängd olika material som dokumenterar studentens aktiviteter, såsom fotografier, ljud- och filminspelningar, åsikter från mottagare och studentens rapporter som innehåller hans/hennes självvärdering och reflexioner om den utbildningserfarenhet som erhållits.

Vi föreslår att konceptet för service-learning kombineras med ENHANCE ramverk för mikromeriter. Det innebär att studenters engagemang och hans/hennes läroerfarenhet kan bekräftas och dokumenteras som en mikromerit (en ENHANCE mikromerit om service-learningaktiviteten utvecklats och genomförts gemensamt av parterna inom ENHANCE-alliansen). Inom ENHANCE ramverk för mikromeriter, är så kallade 'badges' den huvudsakliga typ av mikromeriter som tilldelas dem som deltagit i service-learning.

Att tilldela 'badges' är särskilt användbart när service-learning är en aktivitet utanför kurs- och programplaner. I det fallet intygar en 'badge' studentens engagemang i samhällstjänst. 'Badges' kan emellertid också tilldelas för service-learning som utgör del av en students kurs- och programplan. I så fall ska det aktuella dokumentet (som intygar 'badgen') också innehålla en beskrivning av lärandemålen och antal ECTS som tillskrivs aktiviteten, baserat på en bedömning av studentens arbetsinsats.

Störst utrymme i rapporten har använts till att presentera olika exempel på service-learning som äger rum inom ENHANCE-universiteten.

Varje fall beskrivs genom att ange aktiviteternas övergripande syfte, deltagarna (den valda gruppen studenter), vilken metod som använts, tillfälle (varaktighet och schema för

aktiviteterna), vilka externa partner som varit involverade, detaljer av de tjänsten som genomförts, lärandemålen och, i vissa fall, deltagarena åsikter.

De presenterade fallen är ämnade som inspiration och goda exempel som kan stödja utveckling och genomförande av service-learningkoncept. Det arbete som gjordes den 27 april 2022 i Göteborg under ENHANCE personalvecka (som en del av inriktningen 'Innovativa Lärmiljöer' som leddes av WUT) blev ett avgörande steg i utveckling av en för ENHANCE-universiteten gemensam ansats och utformning av service-learningaktiviteter. Femton personer representerande ENHANCE-universiteten deltog i den sessionen under personalveckan.

Reslutaten från workshopen, som presenteras sist i vår rapport, innehåller, bland annat, det expanderade konceptet för service-learningansatsen. Samtidigt formuleras rekommendationerna om hur service-learningaktiviteter ska vidareutvecklas inom ENHANCE-universiteten som resultat av djupdiskussioner och personliga erfarenheter bland deltagarna i workshopen. Idéer, riktlinjer och praktiska exempel för att utveckla en uppföljningsstrategi för våra samhällscentrerade initiativ lyfts också fram.

Den här rapporten kan ses som *verktyget* som kan användas för att utveckla gemensamma service-learningaktiviteter inom ENHANCE och för att rikta uppmärksamhet mot kritiska samhällsutmaningar så som att stötta det ukrainska samhället, organisera evenemang för att främja vetenskap eller för engagemang i aktiviteter som rör genus och jämställdhetsfrågor.

1. Introduction

1.1. Objectives

This toolkit aims to describe the concept of service learning, present the examples of the ENHANCE Alliance activities in applying the concept, and support service learning by students.

1.2. Toolkit layout

First, there is the short introduction to service learning and the description of several frameworks for service learning. Then the possible approaches to assessment, certification, and recognition are presented. Next, the examples of different learning modules from the Alliance universities are explored. Finally, there is the description of the workshop results on the service learning that took place on the second day of the ENHANCE Staff Week in Göteborg, Sweden, on April 27th, 2022.

1.3. Definition

Service-learning (after <https://en.wikipedia.org/wiki/Service-learning>) combines learning objectives with community service in order to provide a pragmatic, progressive learning experience while meeting societal needs.

Following Knapp and Fisher (2010), service learning *“involves students in service projects to apply classroom learning for local agencies that exist to effect positive change in the community”*. National Youth Leadership Council (2009) described it as *„a philosophy, pedagogy, and model for community development that is used as an instructional strategy to meet learning goals and/or content standards.”*. Jacoby (1996) called it *“...a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities for reflection designed to achieve desired learning outcomes.”*.

The essential aspect of service learning is raised by Zlotkowski (1996). He states that *“service learning is not simply academic credit for volunteer work and community service. Successful service learning also requires that the service experience be related to classroom concepts. The emphasis must on learning, not service.”*

Service learning typology proposed by Sigmon (1997) distinguishes its four aspects:

- Service-LEARNING: Learning goals primary; service outcomes secondary.
- SERVICE-Learning: Service outcomes primary; learning goals secondary.
- service learning: Service and learning goals are completely separate.
- SERVICE-LEARNING: Service and learning goals of equal weight and each enhances the other for all participants.

Bringle and Hatcher (1996) divide service learning into **extracurricular** and **curricular** community partnerships.

1.4. Service learning at technical universities

The challenge of modern education is to guarantee the usability and applicability of knowledge while providing students with the tools to apply it in practice. Therefore, it is important to teach students skills to manage real-life problems and social challenges. Moreover, emphasizing the connection between theory and practice is essential for stimulating interest in education and sustaining motivation in the learning process. Service-learning competencies require challenge-focused, competence-focused and capacity-building education. In the case of technical universities (universities of technology),

including some technology-related components in service learning experience would be a naturally recommended solution.

2. Frameworks for service learning

Salam (2019) reviews many theoretical and conceptual frameworks for service learning presented in the literature.

Bringle and Hatcher (1996) proposed a **Comprehensive action plan for service learning** (CAPSL). Their proposition contains a number of steps to apply service learning in higher education. These steps include planning, awareness, resources, prototype, progress monitoring, expansion, recognition, evaluation and research. The CAPSL model is frequently utilized as the instrument for evaluating the status of service learning in higher education institutions.

Petkus (2000), Roakes and Norris-Tirrell (2000) proposed utilization of **Kolb's experiential learning cycle** (Kolb, 1984) to design and implement service learning. Kolb's experimental learning cycle covers four essential elements of service learning: (i) practical on-site experience, (ii) reflection on service learning experience, (iii) abstract conceptualisation and (iv) active experimentation.

A three-dimensional framework for the design and implementation of service learning projects in computer science and information technologies was proposed by Nejme (2012). It is based on three dimensions: (i) potential project types, (ii) list of activities performed in a service learning project and (iii) type of provision of the project.

3. Assessment, certification, recognition

Service learning can be seen as either part of the curriculum or, more frequently, as an extracurricular activity.

In the first case (an obligatory or elective component of the curriculum), this activity should be developed and implemented in a similar way as a typical course. Referring to the earlier discussed typology proposed by Sigmon (1997), this should be the service-LEARNING or the SERVICE-LEARNING experience.

It means that its particular focus is on the clear definition of the learning outcomes. At the same time the relevant procedure to assess whether these learning outcomes have been achieved by the student should be developed and implemented. Unlike a typical course in an engineering curriculum, the learning outcomes for the service-learning "course" comprise mostly of skills and social competences with the limited, if any, knowledge component. (However, some theoretical knowledge both on the subject matter of the activity and the pedagogy related to service learning might be required). The student's workload necessary to achieve the intended learning outcomes should be estimated and the appropriate number of ECTS point should be assigned. Service learning quite frequently has the form of self-paced learning. However, if activities are organized in a specific timeframe, the total number of contact hours can be also specified.

The assessment of learning outcomes would most likely differ from that used for typical courses. The written examination/test is unlikely to be useful. Instead of it, the review and evaluation of the portfolio submitted by the student might be requested and used as the means to assess (and grade, if necessary) the student's performance. Such a portfolio can contain various materials documenting the student's activity, including multimedia

materials: photos, audio or video-recordings and the report of student's self-assessment and the reflection on the educational experience gained.

The assessment of the learning outcomes achieved by the students may result in a grade. In particular, the grade must be given if the regulations adopted at the university require that each course must be graded "numerically", i.e. the simple binary grading scale "pass/fail" cannot be applied.

In the case when the service learning is considered an extracurricular activity, the student engagement and his/her learning experience can be recognised in the form of a micro-credential (an ENHANCE micro-credential, if that service learning activity is developed and offered jointly by the partners of the ENHANCE Alliance). In the ENHANCE micro-credentials framework, badges are seen as a primary type of micro-credentials awarded for service learning.

In general, badges can be awarded with rather informal methods of learning outcomes assessment or even based on participation in learning activities. This does not mean that it is not necessary to define the learning outcomes. It can be expected, however, that the intended learning outcomes are even more focused on skills and social competences (the knowledge component being unlikely) than in the case of service learning experience being part of the curriculum.

Although in the case of a badge, informal methods of learning outcomes assessment can be applied (the badge can even be awarded based on the participation in service learning activities), more comprehensive learning outcomes assessment can also take place. This could result in awarding ECTS points which consequently could be included in the document containing the badge description received by the student. Although badges are generally considered as stand-alone (non-stackable) micro-credentials, in this case (a badge with clearly defined learning outcomes, the method of their assessment and the number of ECTS points) stackability is possible. It means that ECTS points can be recognised as a partial fulfilment of the curriculum requirements (service learning activities confirmed by the badge can be recognised as the equivalent of an elective course). Clearly, the decision regarding this kind of recognition is to be made by the institution that runs the degree programme the student is registered for.

Regarding the assignment of the EQF level to service learning, this might be a difficult process, especially if the majority of learning outcomes are in the category of social competences. Besides, the learning experience associated with service learning is relatively small (in terms of the number of ECTS points) compared with a single course being part of a degree programme. Therefore, it is not recommended to assign the EQF level to badges awarded for service learning.

The idea of awarding badges for service learning as an extracurricular activity does not preclude awarding badges to students who accomplished some essential service learning as part of their curriculum. In this case, the relevant document (confirming the badge) will obviously include the number of ECTS points together with the description of the learning outcomes.

Regardless of whether or not the badge is assigned ECTS points and if these points are recognised towards the degree requirements, the service learning documented by the badge should be reflected in the Diploma Supplement received by the student upon successful completion of the degree programme.

4. The examples of the service-learning at ENHANCE universities

4.1. Technology support to schools (PoliMil)

Objective:

Throughout the year 2021, *Politecnico di Milano* (POLIMI) involved 114 of its students in the project aimed at supporting secondary schools in the use of technologies (devices and software) for teaching.

In this project each school was assigned one or more students who supported it in solving technical problems through the interaction with teachers and students who encountered difficulties in using technological tools.

Participants:

The undergraduate or Master of Science students from *Politecnico di Milano*.

Method:

Two main methods were used:

- the school teacher collected the questions and forwarded them to the students who answered them on a daily basis (every 2 days in this case);
- "live desk": the student was available online on certain days/times to immediately answer the questions formulated by various teachers.

Following teacher's specific recommendations *Politecnico di Milano* students were also involved in supporting the groups of students with specific difficulties (related to the use of technology), to tackle/resolve the identified issues such as:

- The use of devices (e.g. tablets, notebooks, etc.) for teaching activities.
- The use of platforms in managing and organizing teaching activities.
- The use of platforms for distance learning lessons.
- The use of different materials and communication channels (e-mail, Facebook, WhatsApp, and many others) used by schools to interact with families and students.

Timing:

The students collaborated with the targeted schools throughout 2021.

External partners:

Teachers and students of secondary schools.

Service implemented:

Supporting groups of secondary school students with specific difficulties (related to the use of technology).

The opinions:

"I delved a lot into tools that I will definitely be using in the future since there are many features that I didn't know but that could be very useful to me at the university."

"I was assigned to a suburban school, full of special stories and complexities. The project turned out to be challenging but wonderful: I am giving real help to those who really need digital support to overcome everyday difficulties (Learning disabilities and disorders, language barriers, etc.)."

"I'm a bit disappointed because I would like to do more: unfortunately, the end of the academic year makes it almost impossible to keep in touch with the school. I would like to be

able to offer concrete opportunities to the students, to convey enthusiasm to them. I hope the situation will improve in the next months."

"It was interesting and challenging, especially because we could interact directly with students."

4.2. Rat Relay hackathon (WUT)

Objective:

Rat Relay is a unique three-day global product design hackathon organized by the universities belonging to the Design Factory Global Network - DFGN (www.dfgn.org). Rat Relay simulates a real-world situation in industrial product development where very often one person or one team is only working on a project for a limited time and not from the beginning to the end. In Rat Relay projects are rotated around the world in slots and the topics for the projects are submitted by sponsoring companies, startups or NGOs.

Participants:

The students from DFGN universities (including Warsaw University of Technology).

Method:

Each participating institution works in two six-hour slots per day during the three-day hackathon, in morning and evening shifts, in six slots in total. It is mandatory to participate in each slot. Each institution starts with the project submitted by its partner for the first slot and then hands over the project to the next institution in sequence. Except for the last slot, all the other slots are done in different institutions. The last slot is for completing the project and finishing it to be ready to be delivered to the sponsor after the Relay. The last slot is done by the institution that launched the project in slot 1. Each slot creates a hand-over material to sum up all the work the members of the design team done, choices they made, ideas they created, etc., during their slot.

Timing:

It is an extracurricular event that lasts three days.

External partner:

NGO / industry partner / public administration unit. Warsaw University of Technology cooperated with City Hall of Warsaw and City Hall of Żuromin.

Service implemented:

The work on a prototype for solving one of the external partners' problems such as „Activating Smart City citizens using gamification“, „Odors in Żuromin“. The solutions to problems are crucial for the city inhabitants

Learning outcomes:

Rat Relay offers the unique experience of project planning, project management of remote partners working as "suppliers", product development and project documentation and satisfying expectations and deadlines from the customer or sponsoring company. The main learning outcomes are understanding the work in a real global team, diving deep into global distributed collaboration, handling time pressure, enabling best possible progress for the next team with project documentation and increased argumentation skills for decisions that have been made. Learning outcomes also include process planning skills, product development skills, teamwork skills and international communication skills. The hackathon is assessed with the feedback that is collected from the team after each slot.

The opinions:

"I took part in Rat Relay twice - in 2018 and 2019. It was basically my first contact with Design Thinking in practice. Each time, however, it was an amazing experience, I saw that during each stage we were working on meaningful and relevant issues. My impression was intensified by the fact that after both the first and the second edition of Rat Relay, I saw many of our ideas put into practice, which allowed me to feel great satisfaction with the challenge. Personally, I recommend everyone to take part in such an event, because apart from the essence of the topics discussed there, the experience itself is undoubtedly worth experiencing and gives a fresh perspective also to the challenges faced in everyday work on any professional or scientific projects."

4.3. Smart City course (WUT)

Objective:

The students have the opportunity to learn using the innovative forms of education (mainly Project Based Learning and Design Thinking while solving the real problems submitted by the public administration offices, e.g. City of Warsaw, City of Łowicz, City of Płock.

Participants:

The Bachelor or Master students from the following Faculties: Geodesy and Cartography, Electronics and Information Technology, Architecture and Management from Warsaw University of Technology.

Method:

The students work using the innovative forms of education (mainly Project-Based Learning and Design Thinking).

Timing:

It is an extracurricular learning unit, the project lasts 2 semesters, but recruitment is conducted every semester. Each student may participate in the course for one or two semesters.

External partner:

Public administration offices, e.g. City of Warsaw, City of Łowicz, City of Płock

Service implemented:

The work on a prototype for solving one of the external partners' problems such as Smart City Project - New Market Square in Łowicz Technological Part. The solutions to these problems are crucial for the city inhabitants.

Learning outcomes:

After completing the learning unit, the student has the knowledge necessary to understand the social determinants of engineering activities and take them into account in engineering practice. He/she can, taking into account the existing limitations and non-technical requirements, formulate a specification and design a system consisting of Internet of Things devices for a Smart City or make a business plan. The student is ready to think and act in a creative and entrepreneurial way, work in an interdisciplinary team and solve complex problems.

4.4. Adapting workstations for people with functional diversity (UPV)

Participants:

The Master students in Occupational Risk Prevention (Department of Construction Engineering and Civil Engineering Projects, Universitat Politècnica de València).

Method:

The students were grouped into 8 teams of 3-4 people (24-32 students). Each team carried out the critical analysis of 4 jobs in a particular employment centre for people with functional diversity.

Timing:

It is an intracurricular subject ([Ergonomic Adaptation of Workstations](#)), it takes a semester to run, launched regularly every year.

External partner:

Roig Alfonso Foundation (<https://avfcv.com/fundacion-roig-alfonso-de-la-comunidad-valenciana/>), dedicated to labour inclusion in the ceramics sector.

Service implemented:

Service to the organisation by returning the dossiers with the multiple risk analyses, improvement proposals, application of different ergonomic evaluation techniques (NIOSH, OCRA, REBA...) carried out in 3 weeks of class afterwards. The support of the manager in the exhibition of final projects to discuss with students and co-evaluate their work with the teacher.

Learning outcomes:

The "ADAPTyAR" methodology to carry out the double analysis that this entails; to focus on both the profile of the job and the profile of the person who does it. The students from each team visited the foundation's facilities to:

- take data, videos and photos of the posts.
- interview the Human Resources manager about the disability of the person(s) doing the job

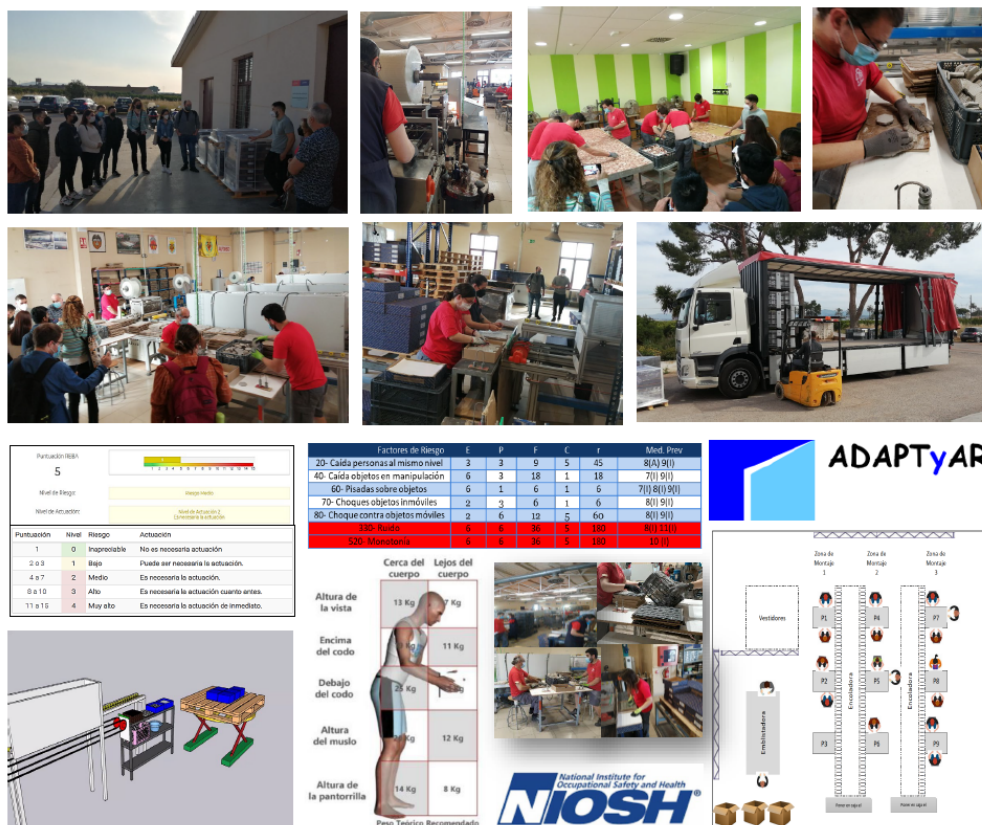


Figure 1 Adapting workstations of people with functional diversity

4.5. Hosting in tandem (UPV)

Participants:

The Bachelor students the UPV, from Fine Arts to Industrial Engineering (Department of Applied Linguistics, Universitat Politècnica de València).

Timing:

It is an intracurricular subject ([Academic and Professional German A1](#)), it takes a semester to run, launched regularly every year.

External partner:

Pre-school and Primary School (CEIP) Ballester Fandos.

Service implemented:

Responds to the need for intervention in an educational centre in a socially disadvantaged community, by transmitting knowledge to school children so they can interact with the refugees in Germany.

Learning outcomes:

Designing teaching materials that reinforce meaningful learning. Developing oral and written skills. Improving awareness of a distinct but nearby social reality: a school that hosts refugees. Developing awareness of a current problem: the refugee crisis.



Figure 2 Learning numbers / Attention recording! / Where are you from?

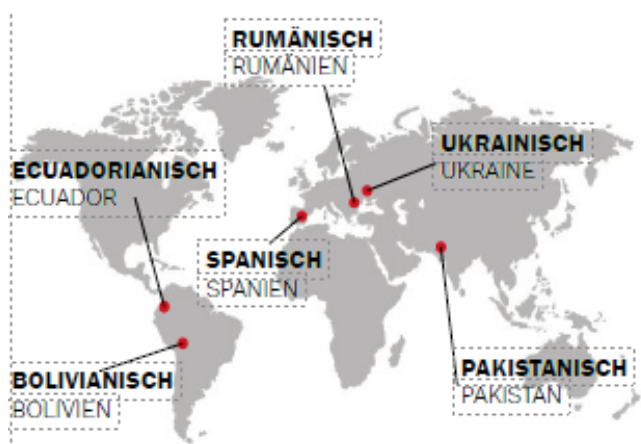


Figure 3 Pronunciation exercise / Nationalities vocabulary

4.6. APS Comic Asperger (UPV)

Participants:

The Bachelor students in Fine Arts (Faculty of Fine Arts, Universitat Politècnica de València).

Timing:

It is an intercurricular subject ([Drawing processes, techniques and materials](#)), it takes two semesters to run, launched regularly every year.

External partner:

Asperger Association, Valencia

Service implemented:

Producing a comic as the example of didactic material to be used in talks at secondary schools to raise the problematic reality of bullying to the students using a youthful and familiar language.

Learning outcomes:

Learning graphic narration in all its phases. Design and graphic editing project. Getting to know other realities of young people with difficulties. Understanding and integration. Teamwork. The knowledge of current problems. Planning and time management.



Figure 4 APS Comic Asperger

4.7. Mural painting: Sustainable Development Goals dissemination (UPV)

Participants:

The Bachelor students Students of Conservation and Restoration of Cultural Heritage programme (Faculty of Fine Arts, Universitat Politècnica de València).

Timing:

It is an intracurricular subject (“Drawing processes, techniques and materials”), it takes two semesters to run, launched regularly every year.

External partner:

Albal High School, Valencia.

Service implemented:

Disseminating the Sustainable Development Goals (SDGs) to the educational community and the population of Albal (Valencia). Collaborating with the school's educational project, intervening on the main façade of the school by covering it with an educational mural.

Learning outcomes:

Design and development. Process learning for the development of a mural painting. Teamwork and leadership. Planning and time management. Ethical responsibility and knowledge of current issues. Ethical, environmental and professional responsibility.



Figure 5 Mural painting: Sustainable Development Goals dissemination

4.8. A walk through the orchard (UPV)

Participants:

The Bachelor students of the programme in the Fundamentals of Architecture (School of Architecture, Universitat Politècnica de València).

Timing:

It is an intracurricular subject ("Introduction to Architecture"), it takes a semester to run, launched regularly every year.

External partner:

Auxilia Valencia works with the people in wheelchairs who have different serious disabilities. They always need to be accompanied by volunteers.

Service implemented:

Guided architectural tours adapted for people with different disabilities, especially motor disabilities. These tours are in the Valencian Orchard where accessibility is scarcely guaranteed.

Learning outcomes:

Knowledge and reflection on the architect's needs and social responsibilities. Transmission of information, ideas, problems and solutions to the public. Understanding of the relationship between people and buildings, and between buildings and their environment according to human needs and scale. Knowledge of the vernacular architecture basics. Due to the health safety problems of the at risk population concerning COVID 19, the association and the students agreed to make a "virtual tour" using the h a video the students had recorded for the association or their private use.



Figure 6 A walk through the orchard

4.9. Architectural Heritage Documentation Techniques (UPV)

Participants:

The students of the Master's Programme in Geomatics Engineering and Geoinformation (School of Engineering in Geodesy, Cartography and Surveying, Universitat Politècnica de València).

Timing:

It is an intracurricular subject ([Architectural Heritage Documentation Techniques](#)), it takes a semester to run, launched regularly every year.

External partner:

Asociación Círculo por la Defensa y Difusión del Patrimonio Cultural.

Service implemented:

Historical-graphical documentation of the Casino del Americano (late 19th century), formerly known as the Quinta de Nuestra Señora de las Mercedes, with the 3D reconstruction of its original state. It is currently in ruins and subject to acts of vandalism as

it has no special protection from the City Council. The association aims to promote the cataloguing of the building as a Property of Local Relevance (BRL-Bien de Relevancia Local) or Property of Cultural Interest (BIC-Bien de Interés Cultural). From the graphic documentation process, it is possible to obtain plans, elevations and sections using 3D modelling and historical photographs to show the possible virtual reconstruction of the external part of the building.

Learning outcomes:

Study process, graphic documentation, and conservation of architectural heritage, with classical techniques, both historical and digital photographs. 3D modelling learning. Application and practical thinking. Innovation, creativity and entrepreneurship. Design and development. Teamwork and leadership. Ethical, environmental, and professional responsibility. Critical thinking. Knowledge of current issues. Planning and time management.



Barrio de Benicalap, Valencia.

Figure 7 Architectural Heritage Documentation Techniques

4.10. MEPO (NTNU)

Objective: This is an online platform developed by students at NTNU (Norwegian University of Science and Technology) where Psychologist-services are collected on a website. It is essentially a digitalized and automated psychologist-service, and the objective is to enable the general public to easily choose the services they need via an online portal. Available psychologists and their services are listed in the portal, and it is easy to choose exactly what you need. Website: www.mepo.no

Participants: Entrepreneurship-students.

Partners: External psychologists in several cities in Norway.

Method: Online portal, collection of services to the general public.

Timing: Not really relevant, the service is up and running and is already used by the public.

Learning outcomes: not described in this project, as it is essentially a student-led start up.

Service provided: assistance in providing psychological help. It is easy to navigate, contains readily accessible information about services, costs etc and is a low-threshold offer.

4.11. The Vector Programme (NTNU)

Objective: A programme for students in Mathematics where they go to secondary schools in the local area to work as teaching assistants in Mathematics. The intention of the organization is to increase the interest in Maths/other STEM-subjects in school, by providing assistance in class among pupils in lower and higher secondary school.

Participants: students in Mathematics.

Partners: secondary school students.

Timing: 3-6 weeks.

Learning outcomes: not defined.

4.12. INTIZE: Mathematic mentorship (Chalmers University of Technology)

Objective: Providing mentorship in mathematics for high school students in need of help and guidance in developing mathematic skills.

Participants: All students may become a mentor as an extracurricular activity.

Method: The mentor meet a group of 4-5 mentees with the aim to guide and inspire them in their mathematical development in a more focused way than what they can get through mathematic education at their schools.

Timing: One per week during the semester (except for exam weeks), for two hours each time.

External partners: Intize, intize.org

Service implemented: Mentorship for high-school students.

Learning outcomes: No learning outcomes; extra-curricular activity.

4.13. Teddy Bear Hospital (RWTH Aachen)

Objective: The Teddy Bear Hospital (TBH) is a student project that aims to take away the fear of doctors and the hospital from children of kindergarten age in a playful way.

Participants: Our teddy doctor staff consists of students of human medicine and dentistry, who have previously attended a workshop of pediatricians and child psychiatrists, in which they are prepared for dealing with children.

Method: The children come to the teddy doctors as parents of their cuddly toys and can thus experience the situation from an observational perspective without being directly affected - they also experience that the teddy bears feel much better after the visit to the doctor. This is intended to reduce fear of contact. Before the corona pandemic, about 1800 children from the region visited the TBH every year with their kindergarten group or their parents, where their cuddly toys were treated by 120 teddy doctors.

Timing: not specified.

External partners: The Red Cross regularly provides us with an ambulance, which the children can visit at the end, and the Pharmacists Without Borders regularly support us in the form of a "cuddly toy pharmacy", where plasters, scarves, tea, hot water bottles, etc. are handed out.

Service implemented: reducing children's fear of medical treatment/hospital

4.14. Sustainable handprints (TU Berlin)

Objective: Development of an app for mapping sustainability-related activities in the residential environment together with pupils of the Geschwister-Scholl-School of the city of Zossen (Germany).

Participants: Students and high school students.

Method: Co-creational participative development of the app design.

Timing: only once, winter semester 2021/22, no repetition.

External partners: Municipality of Zossen, teachers of the Geschwister Scholl High School Zossen, pupils of the school

Service implemented: Development of the app achieved

Learning outcomes: not defined.

4.15. Greenhouse gas savings through do-it-yourself-cultures (UTIL) (TU Berlin)

Objective: Using eco-benchmarks for individual products (suitcases, mixers, kettles, etc.), students developed an overview over several years to enable repair café operators to roughly estimate the CO2 savings from their repair activities at a simple level.

Participants: 5 students from UTIL (Umwelttechnisch-Integrierte Lehrveranstaltung) and the repair team from Repair Café BRUNNENVIERTEL Berlin

Method: The students developed the project design and coordinated it together with scientific assistants and on the other hand with the repairer practitioners of the repair café. The results of the life cycle analysis were presented and discussed within the "UTIL conference" at TU Berlin and on the Christmas party of the repair café.

Timing: 4 times, summer semesters 2014-2018

External partners: Repair Café Brunneviertel Berlin

Service implemented: Action-oriented knowledge about greenhouse gas savings potential through repair activities

The opinions: The project was initiated by TU Berlin's science shop *kubus* with high personnel expenditure and received great approval among students. Despite several attempts, long term institutionalization could not be achieved.

4.16. Mapping Torhaus (TU Berlin)

Objective: Collaborative mapping to achieve better satisfaction of the needs of the different user groups of the Torhaus building at former airport Tempelhofer Feld (Berlin)

Participants: students, association Torhaus e.V.

Method: geographic mapping

Timing: once, two-years duration, starting from winter semester 2021/22

External partners: Association Torhaus e.V. and different stakeholder groups

4.17. Solar Heat for a House Project (TU Berlin)

Objective: Maintenance of a solar thermal system in a house project built by a previous energy seminar project.

Participants: students of different disciplines

Timing: once, summer semester 2023

External partners: Association Hausprojekt K40 Berlin

Service implemented: solar thermal system maintained

4.18. Kreise Schließen (Close Circles)(TU Berlin)

Objective: Inventory of up to seven buildings in the municipal district of Charlottenburg-Wilmersdorf that are classified for deconstruction. The components of the selected buildings are to be analyzed in terms of their value as a material bank - in terms of the use of donor materials contained - by means of drawings and calculations. The potentials resulting from this analysis are then to be further developed as prototypes.

Participants: architecture students, representatives of Municipality Charlottenburg-Wilmersdorf (Land of Berlin)

Method: Case studies, inventories for material cycle management

Timing: summer semester 2022

External partners: Municipality Charlottenburg-Wilmersdorf (Land of Berlin)

5. Workshop – Service Learning: New opportunities for Students and PhD Candidates

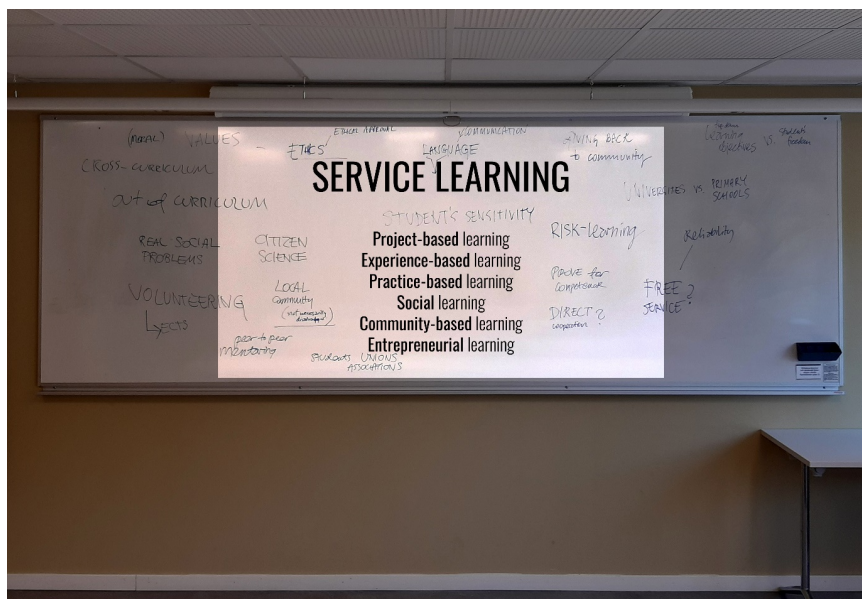
The workshop run on the second day of the ENHANCE Staff Week in Göteborg, Sweden, on the 27th April, 2022

Tutor: Artur Jerzy Filip (Warsaw University of Technology)

Participants: around 15 people representing all the ENHANCE universities

5.1. Workshop overview

During the first part of the workshop (1 hour) the participants introduced themselves and shared their ideas on the understanding of service-learning or what it might be. After the tutor provided a draft proposal displayed on the screen, each participant built upon it by adding more and more characteristics of the service-learning approach with the reference to their personal experience and to how the term had been used in their professional environments. Finally, the whole mind-map was the subject of the general discussion on the most controversial features, which were then marked with question marks. The result is presented below.



In addition to the list prepared in advance (project-based, experience-based, practice-based, social, community-based, and entrepreneurial), the final board included such desired features of service-learning as:

- value-based (moral, plus a possibility of an ethical approval requirement),
- cross-curriculum (or even out-of-curriculum),
- referring to real social problems,
- giving back to the community,
- risk-learning,
- developing students' sensitivity to public issues,
- focused on local communities, not necessarily disadvantaged ones.

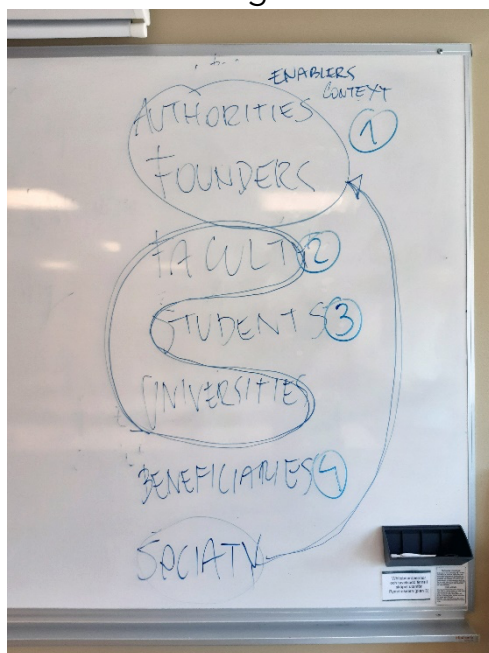
The following particularly controversial aspects were identified and discussed:

- volunteering vs scoring ECTS points,
- free students' service vs service providers' reliability,
- direct cooperation vs indirect support,
- top-down (sticking to learning objectives) vs bottom-up (students' freedom of service-learning formulation).

Moreover, specific kinds of service-learning implementation were identified:

- service-LANGUAGE-learning (focused on communication skills),
- students offering service-learning to their own community (example of peer-to-peer mentoring or students unions and associations),
- university communities supporting school communities.

5.2. Framework: How can ENHANCE universities develop service-learning activities?

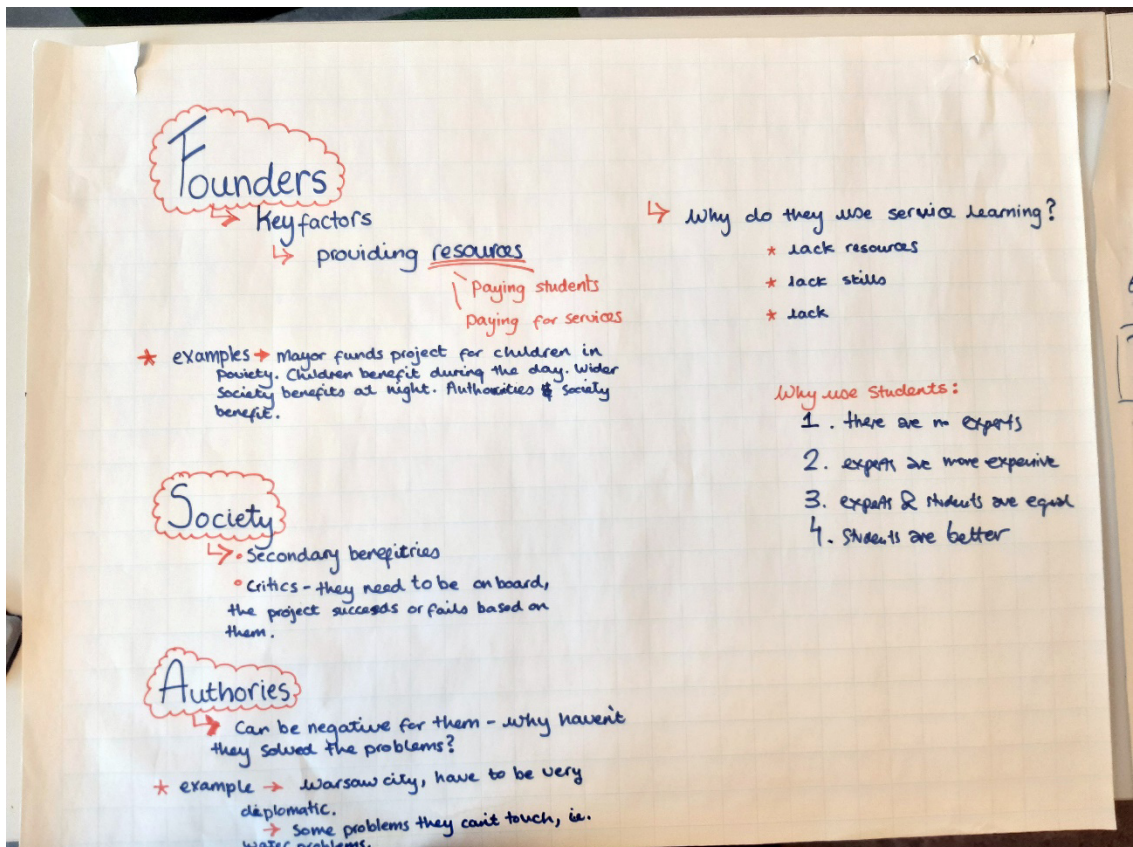


The objective of the second part of the workshop was to initiate more in-depth discussion and formulate the recommendations for further development of service-learning activities within the ENHANCE universities: to provide best ideas and practices for building a follow-up strategy for our society-centered initiatives. Therefore, the participants defined seven key stakeholders of the service-learning process: public authorities, external founders, universities, faculties, students, beneficiaries, and society in general. Finally, the seven groups were narrowed down to four:

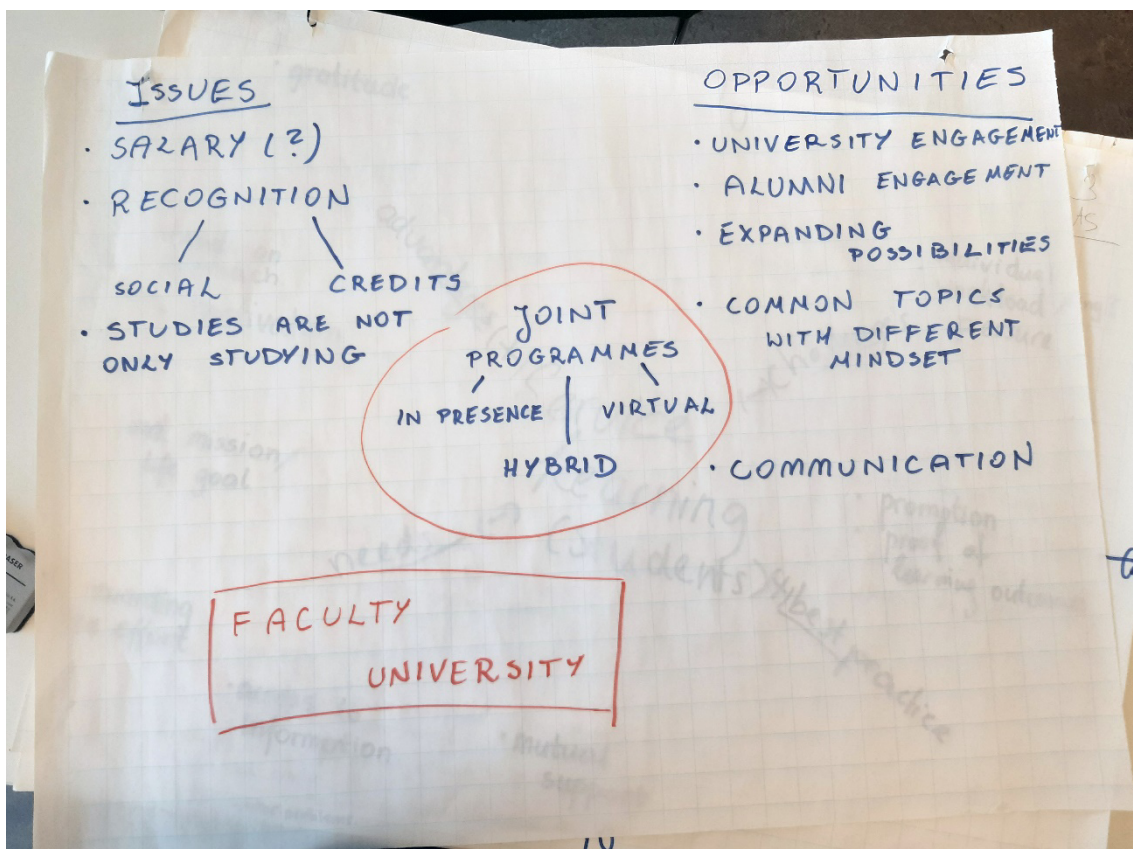
- ENABLERS (public authorities, external founders, and the society),
- PROVIDERS (university authorities, staff members, and faculties),
- PARTICIPANTS (students),
- BENEFICIARIES.

The participants were then divided into four working teams (with the representatives of each country distributed between groups). Each team discussed one of the service-learning stakeholder groups. Finally, each team presented their results in front of the whole group. All participants agreed on the necessity to develop service-learning further and to stay in touch via emails.

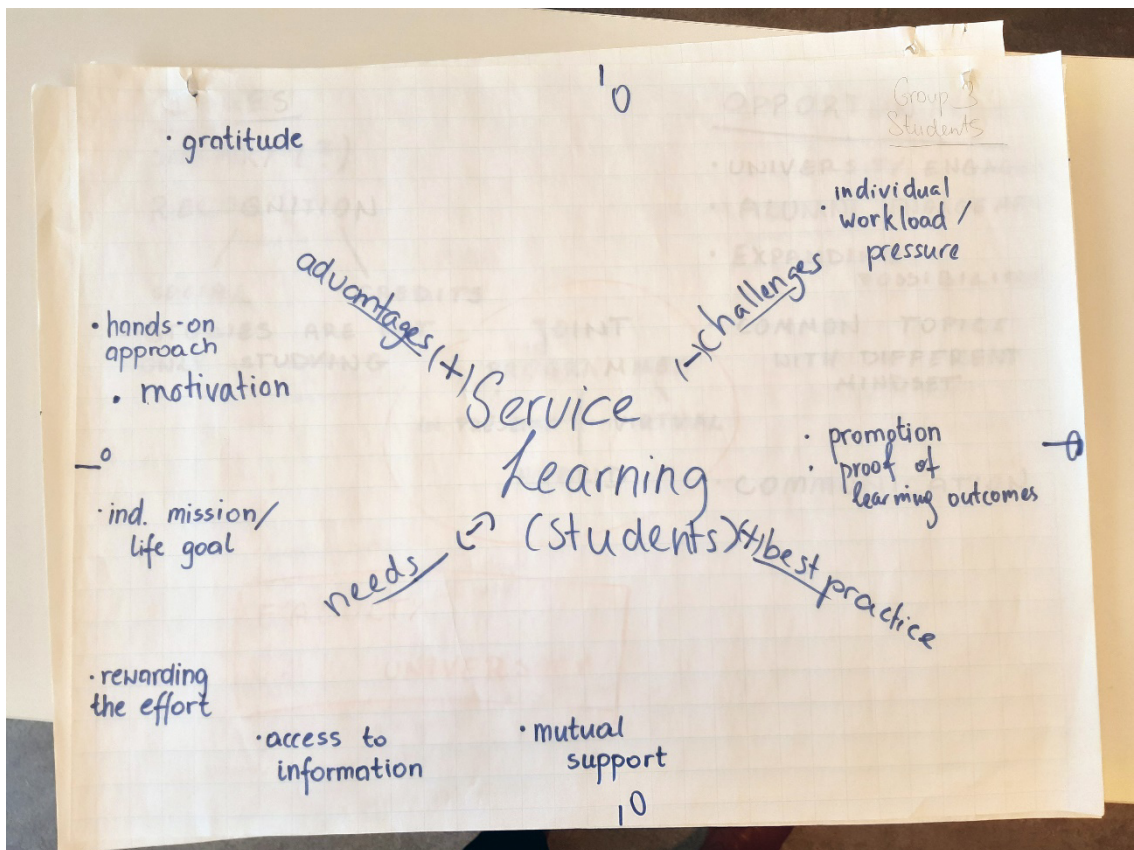
5.2.1 ENABLERS: public authorities, external founders, and the society



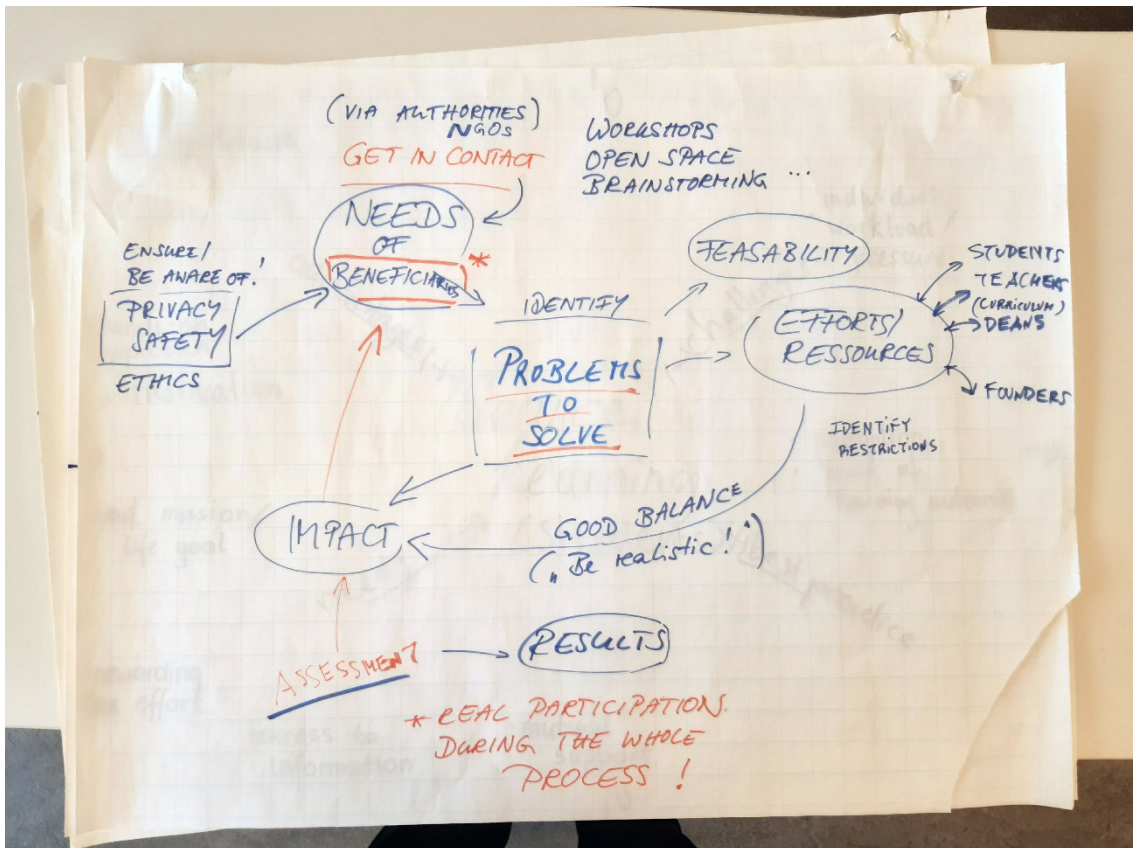
5.2.2. PROVIDERS: university authorities, staff members, and faculties



5.2.3. PARTICIPANTS: students



5.2.4. BENEFICIARIES



5.3. SUMMARY: THE CHALLENGES

The list of challenges developed by the teams in the workshop is shown below. They are a draft form of recommendations to develop service-learning activities within the ENHANCE universities further. They indicate both opportunities and threats to building a follow-up strategy for our society-centered initiatives.

1. **ENABLERS:** public authorities, external founders and the society:
 - founders needed as resource providers, not necessarily as remuneration payers,
 - society in general considered as a secondary beneficiary and a public critic at the same time,
 - authorities in danger of being accused of inefficiency (if service-learning is needed at all),
 - quality of students-driven-service must be reasonably compared to experts-driven-service (worse but cheaper, equal, better).

2. **PROVIDERS:** university authorities, staff members, faculties:
 - the general approach: students are not just studying!
 - adapting the curriculum,
 - adjusting the assessment system in terms of the acquisition of social skills and the real-life results of students' actions,
 - establishing partnerships with the external stakeholders,
 - taking responsibility for the results of external activities,
 - cooperation in different formats: face to face, hybrid, virtual.

3. **PARTICIPANTS:** students:
 - encouraging students to acquire social skills,
 - sensitizing students to diversity and complexity of real-life problems,
 - promoting both personal and professional benefits students can gain from the service-learning approach.

4. **BENEFICIARIES:**
 - seeking a good balance between the impact and the resources engaged,
 - building cross-sectoral trust,
 - feasibility,
 - appreciating the skills of students to solve real-life problems,
 - providing real-life problems,
 - privacy and safety required (ethics),
 - real participation during the whole process must be guaranteed.

6. Conclusion

The report can be seen as the "tool" that could support the development and implementation of the concept of service learning at the ENHANCE universities. In particular, the presented examples of good practice could inspire the development of the joint ENHANCE service learning activities that address pressing social challenges such as supporting the Ukrainian community, organising events promoting science, or engaging in activities related to the gender and equality issues.

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