

3.2 Innovation Ecosystem

Fostering Research Skills for an Innovative Future

The College offers an avid platform for the creation and sustenance of an ecosystem which is highly conducive for innovation and research through experiential learning. The various departments promote students to take up innovative projects which focuses on contemporary trends and social issues and also gives them ample scope to pursue it further. The college fosters a research culture among faculty and students through advanced multidisciplinary approaches and thus enhances the interpersonal and persuasive skills, so as to promote critical thinking and problem-solving ability among students. Soft Skill Development Workshops and innovative Certificate courses were offered, to induce research culture among students and to expand their knowledge through analysis, innovation and insight. A workshop on Latex software and a certificate course on *Data Analysis using Excel* was conducted to provide a solid foundation for working with various types of data. Our college offers a *Plant Identification and Botanical Information Service* (BIS) in both online and offline modes for the identification of unknown angiosperm plant specimens. The college also maintains a well-equipped Herbarium which houses 5000 plus specimens. A weblog on biodiversity with special reference to Botanical Information has been successfully maintained and updated periodically by the college. It has been recognized as one among the multimedia resource page of UN-Convention on Biological Diversity for 2010-2020, the Decade on Biodiversity. Also, an exclusive telegram channel (URL: <https://t.me/keralaflora>), started in April 2020, aims at documenting the rare flowering plant of Kerala and supports the on-line activities of BIS. Our institution also offers a certificate course in *Python and Micro Processor*, thus facilitating our students in developing innovative projects in Material Science and Astrophysics. A certificate course in '*Data Analysis using Excel*' was introduced by the institution, thus enabling our students from various disciplines to analyse the data for their project related assignments. Most of the departments possess a well-equipped computer lab which helps the students to acquaint themselves in typesetting software such as Latex, which proves to be useful in dissertation and PhD related activities. The college also possess most modern instruments including atomic absorption spectrophotometer which aids in cutting edge research. Finally, the college library offers, DSpace which captures, distributes and preserves digital research products. Here students can find articles, working papers, preprints, technical reports, conference papers and data sets in various digital formats. As per the MoU with Marian

College, Kuttikanam our library is also providing a Plagiarism Checking Software to research scholars of our college for identifying the occurrence of plagiarism or copyright infringement within their research works. Under the auspices of E-resource centre students are provided with a dedicated server and 30 computers to aid students in their dissertation and thesis works.

Link for more details:

<https://snckollam.ac.in/agora-2019-multidisciplinary-annual-seminar-series/>
https://snckollam.ac.in/kezoofti/2022/10/AGORA_2020-2021.pdf
<https://snckollam.ac.in/paradigms-of-social-science-research-as-part-of-agora-seminar/>
<https://snckollam.ac.in/kezoofti/2022/02/Interdisciplinary-workshop-on-LAtex.pdf>
<https://snckollam.ac.in/plant-identification-botanical-information-service-bis/>
<https://lms.snckollam.ac.in/course/view.php?id=11>
<https://.grassnest.wordpress.com/>
[https://snckollam.ac.in/dst-fist/#iLightbox\[gallery_image_1\]/0](https://snckollam.ac.in/dst-fist/#iLightbox[gallery_image_1]/0)
<http://3.108.72.171:8080/jspui/>

Moulding the Research Fervour and Aptitude

The Research Cell of the college is actively involved in the facilitation and conduct of seminars and workshops so as to aid the academic community in gaining awareness about the new trends and tendencies in the discourses of science and humanities. A few of our programmes to this extent include, “*Trends in Laser Science*”, “*Stem Cells: Past, Present and Future*”, ‘*Space Physics and Nanoscience*’, “*The Crispr-Cas9 Genome Engineering Revolution*”, “*Workshop on Bioinformatics*”, “*International Conference on Recent Trends in Theoretical and Applied Physics*”, “*Evolution and Future of Journalism*”, “*Modern trends in Journalism*”, *National seminar on ‘Reaching the Unreached through Science and Technology’* A Multi-Disciplinary Annual Seminar “**AGORA**” is being conducted in the whole college from 2018-19 academic year onwards. This is a unique seminar series, since in addition to usual invited talks from experts in various fields, students were given an opportunity to present their short project works and were given prize for best presentation. ***Holistic Thought*** is a multi-disciplinary biannual peer-reviewed Journal published by Sree Narayana College, Kollam since 2002. Holistic Thought publishes problem-oriented, empirically-grounded analytical research papers, theoretical and philosophical essays, policy discussions in the field of both natural and social sciences. The college's active ***IPR Cell*** regularly hosts seminars and workshops to update the faculty and students about the new trends and tendencies in the science and humanities disciplines. Our college also publishes a biannual news bulletin ***Kannadi*** which includes the major news occurring in our college, students are the main contributors for this. Through Scholar Support program college imparts personalized additional support to

needy students, with the help of tutors, study materials, additional lecturers question banks, interactive sessions etc.

Link for more details:

https://snckollam.ac.in/kezoofti/2022/10/AGORA_2019-2020.pdf

https://snckollam.ac.in/kezoofti/2022/10/AGORA_2020-2021.pdf

<https://snckollam.ac.in/holistic-thought/>

<https://snckollam.ac.in/kezoofti/2022/02/01.-Research-meth-and-publ-ethics.pdf>

<https://snckollam.ac.in/webinar-on-intellectual-property-rights/>

<https://snckollam.ac.in/ipr-in-biological-sciences-basic-principles-and-opportunities/>

<https://snckollam.ac.in/kannadi/>

<https://snckollam.ac.in/scholar-support-programme-ssp/>

Visit to Research Institutes

The DBT funded Institutional visits were carried by various departments, so as to enable our academic community in gaining perceptual knowledge on research. R&D lab visit for researchers and PG students and as well as the visit to industries. Visits to Jawaharlal Nehru Tropical Botanical Garden and Research Institute, Palode, Trivandrum, CMFRI, Vizhinjam etc. helped students to gain knowledge about the major research works on going in these institutes.

Link for more details:

<https://snckollam.ac.in/visit-to-biotechnology-bioinformatics-division-of-jntbgri-palode-dbt-star-supported/>

<https://snckollam.ac.in/institutional-visit-to-jntbgri-dbt-star-supported/>

<https://snckollam.ac.in/institution-visit-cmfri-vizhinjamgovernment-aquarium-and-hatchery-varkaladepartment-of-zoology-karyavattom-campus-dbt-star-supported/>

Research activities of Students

The college strives its utmost to encourage students in actively participating in seminars and workshops. Furthermore, we motivate our students to present papers on research topics of contemporary relevance. International, national and regional webinars were also conducted to provoke our academic community into fresh pastures of thoughts and innovative ideas. This has in turn facilitated publications in internationally acclaimed journals. Understanding the fact that contemporary research requires ethical affiliations, we ventured to conduct a workshop on “Research Methodology and Publication Ethics” and as well as a session on “Academic writing & Plagiarism”. These sessions had indeed helped our students gain insights on how to approach the books and to prepare content analysis and as well as gain insights on the basic concepts of

research methodology. Several internships were also provided for the students during which researchers explained on working on a research introduction, and as well as the effective use of Laboratory Instruments. Our students have done internships in various reputed research institutes like NIGPR- National Institute of Plant Genomic Research, New Delhi, Department of Biotechnology, CUSAT, CSIR- Institute of Himalayan Bioresource Technology, Palampur, Himachal Pradesh, RGCB, CSIR-NIIST and CTCRI. 3 students from Biotechnology department were selected for DST-SCTIMST Summer Scholarship Program and 3 Students were selected for Summer Research Fellowship Programme jointly sponsored by IISc(Bangalore), INSA (New Delhi) and NASI (Prayagraj)

Link for more details:

<https://snckollam.ac.in/kezoofti/2022/02/01.-Research-meth-and-publn-ethics.pdf>
<https://snckollam.ac.in/kezoofti/2022/12/77.Cloning-and-characterization-of-aspartic-proteinase.pdf>
<https://snckollam.ac.in/kezoofti/2022/12/75.-Cassava-mosaic-disease.pdf>
<https://snckollam.ac.in/kezoofti/2022/12/60.Extending-benefits-of-biomedical-science-and.pdf>
<https://snckollam.ac.in/kezoofti/2022/12/20.-Basic-Concepts-and-Techniques-Used-in-Plant-Pathology.pdf>
<https://snckollam.ac.in/3-students-selected-for-summer-research-fellowship-of-insa/>

Creating ecosystem for a bright Career

In order to acquaint our students with their professional opportunities, various Career Guidance workshops were organized. They are enlisted as follows: *Digital Journalism: The Future Ahead*, *Evolution and future of Journalism*, *Opportunities in mathematics*, *Opportunities in the field of statistics and data science*, *Opportunities in PR and Corporate Communication* and *Opportunities in chemistry research abroad*. The sessions enabled our students to gain insight on professional skills required and different criteria that they will have to follow to achieve those skills. Our college offers Skill Based Programme Certificate courses like “*Tourism and Heritage Studies*” which envisages to impart skill-based education and training in Heritage tourism by equipping the learners with fundamentals of tourism and related service sectors. A ‘*PG Diploma in Biomedical Science*’ is offered by our institution which imparts students the necessary skills to get a job in the biomedical sector. To equip the students with the operation of Adobe premiere pro and FCP Video editing software, a *workshop on Video Editing* was arranged by the Department of Journalism & Mass Communication. To impart students with the basic knowledge in graphic design principles for website designing, a *Workshop on Fundamentals of Graphic Designing* was arranged. Our institution has provided several orientation programmes for the Civil Services Exam like “*Know the roads to LBSNAA*

–MASOORI: Civil Services Exam Orientation”. To add, our institution also initiated the “KAS Mentor-Skill Swarm Mentorship program”, to add a boost to the Kerala Administrative Service examination preparations. The post graduate students of science were also provided with an “Orientation webinar on CSIR-JRF exam”. To cater to the needs of students dreaming of overseas opportunities and career opportunities in financial sector, programmes such as, “Overseas opportunities in higher studies for life sciences” and “Existing and Future Job Opportunities in the BFSI Sector”, were conducted respectively. “Lend your Ears to the Words of Experienced Reality (LEER)” is intended as an Orientation Webinar Series for under graduate students with an aim of orienting them towards a brighter academic and professional space. Often our alumni who are currently engaged in study programmes, research activities, and in positions in national and international institutions of high repute are invited so as to offer their valuable guidance to our student community. A few webinars entitled under the following headings were conducted, and these includes, “Future Prospects for Life Science Graduates’ (LEER-01)”, “Inspiring the Young-Research and Career Opportunities in Chemistry (LEER-02)”, ‘Future Prospects for Physics Graduates’ (LEER-03), and “Future Prospects for History Graduates’ (LEER-04)”.

Link for more details:

<https://snckollam.ac.in/digital-journalism-the-future-ahead/>
<https://snckollam.ac.in/webinar-evolution-future-journalism-on-25-09-21-5-pm/>
<https://snckollam.ac.in/webinar-on-opportunities-in-mathematics/>
<https://snckollam.ac.in/opportunities-in-the-field-of-statistics-and-data-science/>
<https://snckollam.ac.in/national-webinar-on-opportunities-in-pr-corporate-communications/>
<https://snckollam.ac.in/international-webinar-on-opportunities-in-chemistry-research/>
<https://snckollam.ac.in/know-the-roads-to-lbsnaa-masoori-civil-services-exam-orientation/>
<https://snckollam.ac.in/existing-and-future-job-opportunities-in-the-bfsi-sector/>
<https://snckollam.ac.in/kezoofti/2021/05/SYLLABUS-CERTIFICATE-COURSE.pdf>
<https://snckollam.ac.in/know-the-roads-to-lbsnaa-masoori-civil-services-exam-orientation/>
<https://snckollam.ac.in/kezoofti/2021/09/Annual-report-20-21.pdf>

Skill development, Personality Orientation and Mental Health Development.

Our institution in association with Public Relations Council of India, (PRCI) initiated new chapter of *Young Communicators Club* (YCC). YCC will act as a valuable bridge between the academics and the corporate world, offering regular interactions with senior professionals who share their valuable knowledge and experiences. YCC aims at nurturing talents and grooming responsible leaders to lead the society with respect and dignity. The webinar “*Trends in Language Use: Understanding Language Change*”, was intended to discuss the science

behind the apprehension of different languages. Our institution provided an expert level talk on personality development, its theoretical implications and the methodology employed by psychologists to study human personality types. The session also focussed on various personality disorders and explicated the structural complexity defining the various personality traits. An “*RJ hunt*” was initiated in order to enhance and encourage the communicative and interactive skills among the students. An intercollegiate elocution competition held annually in memory of Dr N Jayadevan, former faculty of the Department of Political Science, was also conducted. In order to foster an awareness on diet consciousness, the students engaged in studies related to Biochemistry, were assigned to prepare charts, which were later kept for display in the college canteen. Our institution had provided students with Digital Empowerment through a digital document wallet, an awareness programme on **Digi Locker**

Link for more details:

<https://snckollam.ac.in/inauguration-of-young-communicators-club-ycc-on-24-08-21-10-30-am/>

<https://snckollam.ac.in/dr-n-jayadevan-memorial-state-level-inter-collegiate-elocution-competition-2/>

<https://snckollam.ac.in/national-webinar-on-trends-in-language-use-understanding-language-change/>

<https://snckollam.ac.in/one-day-workshop-on-digi-locker/>

Entrepreneurial Skill Development

Our college functions as an innovation hub that creates student entrepreneurs and provides them with training so as to convert innovative ideas into commercial products. Once the training, the students are initiated to pitch their ideas and build a start-up and scale up with their operations. A seminar entitled “*Winning traits of an entrepreneur*”, was organised by our institution so as to bring up young Entrepreneurs in various business fields. The programme proved to be inspirational enough to the students and helped them gain insights on the importance of entrepreneurship, the challenges that they will come across and how they will overcome it. Another webinar on “Startup Innovatives in Traditional Higher Education System” emphasized on the importance and scope of start-ups in all areas including nontechnical and even non-science area, how to build confidence and hands on skill in students for a venture in start-up. In order to facilitate and strengthen our drive towards a sustainable energy source and to reduce the carbon footprint, a workshop on Solar Panel Installation, was conducted. This initiative is envisaged to develop the entrepreneurial skills of our students in

the field of green energy. The Department of Physics initiated an LED Light assemblage and testing unit. This initiative is hoped to motivate entrepreneurial skills in creating ventures towards to energy sustainability. In order to encourage and popularize homestead gardening of traditional food plants and to create future entrepreneurs, an initiative *SVASTHYA* was designed. Similarly, under the *Earn while you Learn* initiative, various hands-on training Workshops on Mushroom cultivation, Floriculture and flower arrangement, and urban gardening practices such as Terrarium making, indoor plant sapling production and propagation, aquatic ornamental plants and Kokedama were organized. “*Choco Wheels*”, an initiative of the ED club of the college-initiated Cake baking and decoration workshops and as well as, hands on training sessions on production and distribution of Chocolates. A certificate course on *Apiculture and Ornamental Fishery*, was offered, so as to help improve the entrepreneurial skills related to biological sciences. We encouraged our students in the planning and execution of a *Food Fest*, which focused itself on the preparation, display and sales related to various food materials. The Fest was also evaluated based on the presentation and sales and was awarded with grades, thereby boosting their entrepreneurial and marketing skills.

Link for more details:

<https://snckollam.ac.in/winning-traits-of-an-entrepreneur/>
<https://snckollam.ac.in/kezoofti/2022/03/Report-DST-webinar-START-UP.pdf>
<https://snckollam.ac.in/workshop-on-solar-panel-installation-dbt-star-supported/>
<https://snckollam.ac.in/hands-on-training-in-mushroom-cultivation-and-marketing/>
<https://snckollam.ac.in/start-up-initiatives/>
<https://snckollam.ac.in/incubation-and-start-ups/>

Creativity Enhancement

Our institution gives paramount importance to creativity and its channelization. To this extend seminars and workshops were arranged and is narrated as follows. A seminar entitled “*Film and Historical Reflections*” was organized to create an awareness among students regarding the correlation of film and history and how far films are useful an apparatus for reinterpreting history. Short films entitled, “*Day Crime*”, “*Ten Rupee*” and “*Varthamanakala Malayala Cinema*” were showcased in front of invited audience. A programme entitled, “*Visual Narratives: Contemporary Trends and Practices*” was conducted focusing on the evolution of Indian Cinema and on its reinstatement as a global presence in the scenario of world cinema. A webinar on “*Polyphony of Folk Songs*” was conducted enumerating on the different types of folk songs and how it reflects the cultural milieu of different communities in

Kerala. As part of the Gandhi Jayanthi Celebrations, a “*Gandhian Film Fest* was conducted throwing light on the life and preaching of Mahatma Gandhi. As part of *Fiesta Literaria* Lecture series, an introductory lecture on Film Studies was offered; and towards its end the movie ‘*Dead Poets Society*’ was screened.

Link for more Information

<https://snckollam.ac.in/one-day-cinema-workshop-conducted-by-the-department-of-english-and-mass-communication/>
<https://snckollam.ac.in/fiesta-literaria-lecture-series-ii/>
<https://snckollam.ac.in/fiesta-literaria-lecture-series/>
<https://snckollam.ac.in/agora-2020-multidisciplinary-annual-seminar-series/>

Nurturing Literary Talents

A seminar on *Working with Deconstruction* was conducted to familiarize deconstruction as a way of reading rather than a theory of literature. The seminar encouraged students to unravel the inherent contradictions embedded within a text. In addition to this webinar like *The New letters - a Sneak Peak into 21st Century Literature*, an International Webinar on *Black, Asian & Minority Ethnic Lives in Contemporary British Literature* was also organized by the Department of English. *FIESTA LITERARIA-Lyrical Ballads: The Context and Impact of its Publication* provided students ample opportunities to get acquainted with various literary concepts. The Department of Malayalam too has conducted various programmes such as “*Diaspora Literature in Malayalam*”, *Bharana bhashaa Varaghosham* and *K.P. Aappan commemoration*

Link for more Information

<https://snckollam.ac.in/kezoofti/2022/11/8.Lyrical-Ballads.pdf>
<https://snckollam.ac.in/kezoofti/2022/11/9.-Sneak-peak-into-21st-century.pdf>
<https://snckollam.ac.in/kezoofti/2022/11/22.-Black-asian-minority.pdf>
<https://snckollam.ac.in/kezoofti/2022/11/8.-Working-with-Deconstruction.pdf>

Musings on Contemporary Issues

The institution is keen in organizing seminars and webinars on contemporary social and political issues like human rights, gender, media and politics. The college offers a certificate course programme on Indian Government and Politics equipping students of diverse streams to master competitive exam skills. The students are encouraged to conduct debates and

discussion on relevant political issues so as to stimulate their thought process for novel ideas. The students are motivated to opt political issues both local and global as their research topics. A discussion forum on the topic “Police and Media on the Historical Road” was scheduled to foster a better understanding of police and media relations.

Link for more Information

<https://snckollam.ac.in/trans-genders-issues-and-concerns/>
<https://snckollam.ac.in/invited-talk-on-transgenders-issues-concerns/>
<https://snckollam.ac.in/road-safety-life-safety/>
<https://snckollam.ac.in/caa-npr-nrc-myth-or-reality/>
<https://snckollam.ac.in/webinar-on-expanding-horizons-of-human-rights-by-human-rights-awareness-forum-p-g-research-department-of-political-science/>
<https://snckollam.ac.in/the-making-of-a-modern-nation-revisiting-nehruvian-legacies/>
<https://snckollam.ac.in/national-seminar-on-transgender-alienation/>
<https://snckollam.ac.in/7417-2/>

Institutional Contributions: Wrestling with Covid Pandemic

In the wake of Covid Pandemic, our institution had successfully adopted diverse strategic measures to grapple with the situation. Various webinars had been organized to enhance public awareness to ensure effective prevention strategies. “*Bioinformatics at the forefront of the fight against COVID-19 (DBT-STAR Supported)*,” Webinar On “*Role of Phytochemicals in Covid-19 Management*,” “*Corona Virus Disease-2019: All You Need to Know*” are some among them. Hand Sanitizers were manufactured and delivered free of cost to the Government hospitals of Kollam and SBI, Trivandrum Main Branch. An online one-week Faculty development programme on “*ICT tools for teaching learning process-post pandemic educational strategies*” was organized by the Department of Physics in collaboration with the Kerala State Higher Educational Council and IQAC, Sree Narayana College, Kollam. During the pandemic situation our faculty member Prof. V.L Pushpa had published an article entitled “*Theoretical Insights into the Anti-SARS-CoV-2 activity of Chloroquine and its analogs and In Silico Screening of Main Protease Inhibitors*” in the *Journal of Proteome Research*, which was very much appreciated among the scientific community.

Link for more Information

<https://snckollam.ac.in/bioinformatics-at-the-forefront-of-the-fight-against-covid-19/>
<https://snckollam.ac.in/webinar-on-role-of-phytochemicals-in-covid-19-management/>
<https://snckollam.ac.in/webinar-on-covid19-entitled-corona-virus-disease-2019-all-you-need-to-know/>
<https://snckollam.ac.in/sanitizer-making-news-in-the-hindu/>
<https://snckollam.ac.in/chemistry-teachers-in-sn-college-kollam-making-sanitizers/>

<https://snckollam.ac.in/kezoofti/2022/05/ICT-tools-for-teaching-learning-process-post-pandemic-educational-strategies.pdf>
<https://pubs.acs.org/doi/full/10.1021/acs.jproteome.0c00683>

Conservation Strategies

Our institution constantly harbours green initiatives and innovative conservation strategies. Our Energy conservation Club (ENCON) is purely a group activity associated with the younger generation of students aimed at practicing energy conservation and environment protection through a myriad of activities. Our college functions as a conservatory of Endemic and Endangered lesser-known Fruit Trees of Western Ghats - an initiative by the Nature Club in collaboration with Jawaharlal Nehru Tropical Botanic Garden & Research Institute, Palode, Thiruvananthapuram. We have also conducted “*International Seminar on Current Status and Challenges for Conservation and Sustainable Use for Biodiversity (ISCCSB 2020)*” “*Assuring food security through underexploited plants*”, “*National seminar on Environmental science*” in this context. One day Seminar on “*Tripping Point: Science and Politics of irreversible changes in climate*” was conducted to delve into issues pertaining to irreversible climate change and its impacts.

Link for more Information

<https://snckollam.ac.in/kezoofti/2022/10/Report-ENCON-Club-2020-2021.pdf>
<https://snckollam.ac.in/kezoofti/2022/10/Report-ENCON-Club-2019-2020.pdf>
<https://snckollam.ac.in/kezoofti/2022/10/Report-ENCON-Club-2018-2019.pdf>
<https://snckollam.ac.in/kezoofti/2022/09/Biodiversity-club-report-2020-21.pdf>
<https://snckollam.ac.in/seminar-on-tripping-point-science-politics-of-irreversible-changes-in-climate-dbt-star-supported/>
<https://snckollam.ac.in/assuring-food-security-through-underexploited-plants/>
<https://snckollam.ac.in/seminar-on-challenges-for-conservation-and-sustainable-use-for-biodiversity/>

Institution Innovation Achievements

Sree Narayana College has created an Institution’s Innovation Council to achieve recognition as an institution of excellence in innovation promotion ecosystem and thereby disseminating a culture of entrepreneurship in the campus. The IIC invites industry partners and successful entrepreneurs for regular interactions with associated communities. IIC motivates and facilitates student participation in young innovation programmes. In the *Young Innovators Programme (YIP)* run by KDISC, (Kerala Development and Innovation Strategic Council) our students have participated and shared their innovative ideas. An initiative of the

ED Club, “*Choco Wheels*” –an eco-friendly and preservative free chocolate making Business Unit functions in the college which has gained wide popularity among the public. We have acquired an IIC certificate with two-star rating during the calendar year 2021-22. Our college bagged A band in the Atal Ranking of Institutions on Innovation Achievements in 2019-20. In 2020-21 we secured National level second rank in General category for non-technical institutions from ARIIA. Swayam NPTEL recognises SNC Kollam as “Best New LC”, based on performance in NPTEL online Certificate Course. The Knowledge review magazine recognized our institution as one of the Ten best Institutions of Biological Science in the year 2019. The Institution’s Innovation Council of Sree Narayana College, Kollam has created a sustainable ecosystem which in turn has emerged out to be a scalable model for promoting innovation in an impactful and dynamic manner. The ecosystem created in the campus supports all innovative ventures of both the students and the faculty members enabling them to foster their entrepreneurial skills and encouraging their creative energy.

Link for more Information

<https://snckollam.ac.in/incubation-and-start-ups/>

<https://snckollam.ac.in/certificate-from-moe-govt-of-india/>

<https://snckollam.ac.in/ariia/>

[https://snckollam.ac.in/technology-enhanced-learning/#iLightbox\[22a2cc73fc2341b4fdc\]/0](https://snckollam.ac.in/technology-enhanced-learning/#iLightbox[22a2cc73fc2341b4fdc]/0)

<https://snckollam.ac.in/recognition-from-knowledge-review-magazine/>