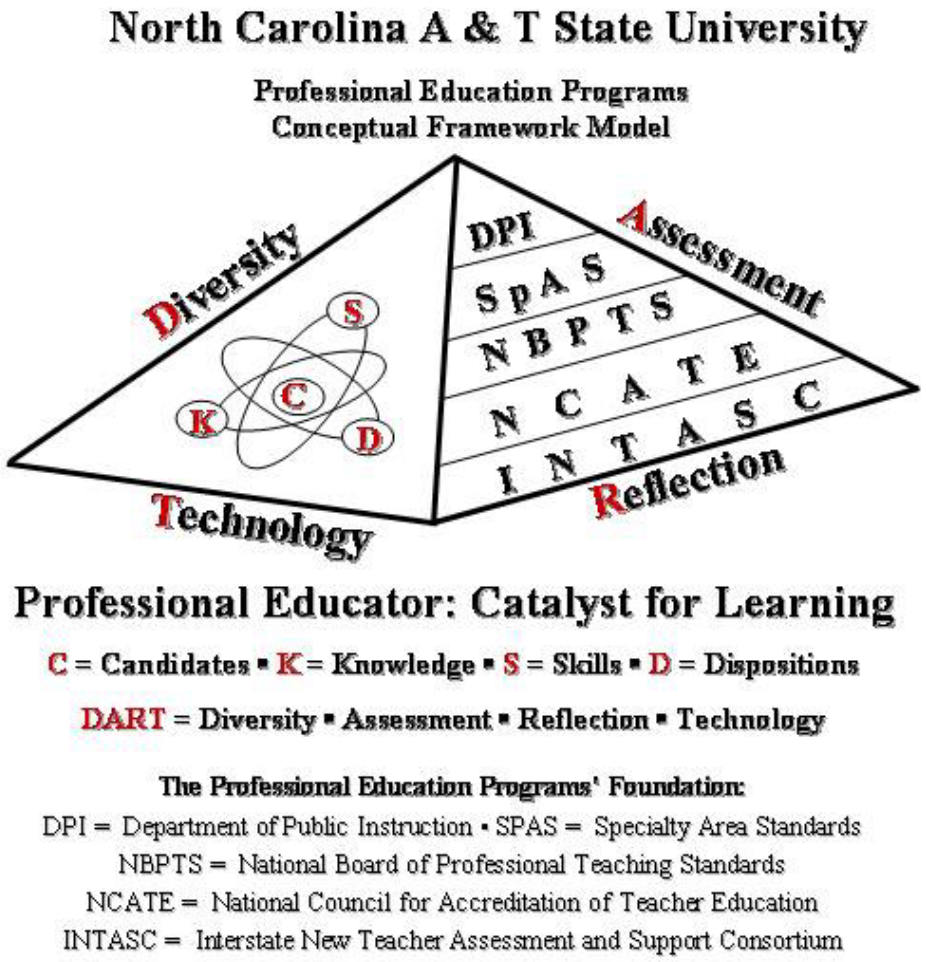
TECH 566 Technology Education Teaching Methods



Professor: Dr. Vincent Childress

Course Syllabus and Information

Required Texts | Course Schedule | Contact Information | Electronic Resources | Course Description | Course Objectives | General Policies | Grading Policies | Internship/Field Experience| Advising | Skills Inventory | Student Teaching/PraxisII

Required Texts

College Live Text which is a means of compiling your required Products of Teaching Portfolio online as required by the School of Education. CD available at the Bookstore. If you have already purchased College Live Text, you do not have to purchase it again.

Borich, G. D. (2006). *Effective Teaching Methods.* (4th ed.) Englewood Cliffs, NJ: Merrill. Prentice Hall (Any edition will work.)

Contact NCA&TSU Bookstore. ISBN 0-13-936130-8 You can order your textbook online. **Please get your textbook by the third week of the semester or as soon as possible.**

Course Schedule

Readings for the week should be completed by Tuesday of that week. **All assignments due for that week should be submitted electronically to the Digital Drop Box** (or hard copy via US mail as specified) **by Friday of that week**. **Do not send assignments as attachments to email.**

Week	Topic	Reading	New Assignments Made	Assignments Due
1: 8-21	Teacher's Jobs Methods We Use	Ch.1 Conceptual Framework Reading Notes		
2:8-28	Student Needs Objectives	Chs. 2, 3 Notes		
3: 9-4	Lesson Planning	Ch. 4, Notes	Unit Plan	
4:9-11	Lectures, Etc.	Ch. 5 College Live Text Tutorial Notes	Lesson Plan 1 Begin Notes for Field Experience	Unit Plan Posted to Live Text instead of the Drop Box this once.
5:9-18	High Level Teaching & Learning	Ch. 6 Notes	Lesson Plan 2 First Presentation (Oral/Lecture) Innovations in Teaching Report	Lesson Plan 1
6: 9-25	Teacher-Student Interaction	Chs. 7, 8 Notes	Lesson Plan 3	Lesson Plan 2

7:10-2	Student Discipline Classroom Mngt. Demonstrations	Chs. 10, 11 VCTTE #2 Notes	Midterm Exam Next Week Second Presentation (Demo.) Lesson Plan 4	Oral Presentation (videotaped w/plan3)
8: 10-9	Midterm Exam Other Methods	Ch. 9, Notes VCTTE #13	Midterm Exam	
9:10-16	Handouts, Media, Modules	Notes Lesson Plan 5	Third Presentation (Media-based) Standalone Learning Module	Demonstration (videotaped w/plan 4)
10: 10-23	Student Evaluation	Chs. 12, 13 Notes VCTTE #11	Two Student Tests	
11:10-30	Educational Resources Database		Educational Resources Database	Media Presentation (videotaped w/plan5)
12: 11-6	Diversity Help on Assignments	Notes		Innov. Teach. Report
13:11-13	Reflective Teaching, TSA, SkillsUSA VICA Help on Assignments	Notes		Last 3 Lesson Plans (1 on DIVERSITY)
11-22 to 11-24	*Thanksgiving Vacation*			
14: 11-27	Help/Discussion on Assignments			2 Student Tests
15:12-4	Review for Final Exam Help/Discussion on Assignments			Resources Database Standalone Module Field Expr. Report
16:12-7 through13	**Final Exam**	Final Exam	Complete by 12-13 at 11:59 pm	

Contact Information

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Home Phone:	(336) 643-7158 call up to 11:00 p. m. eastern time
Work Email:	childres@ncat.edu
Home Email:	vchildress@triad.rr.com (no attachments please)

Visit our web site at: http://www.ncat.edu/~childres/

Electronic Resources

VCTTE Monographs; Journal of Technology Education; Journal of Industrial Teacher Education; Journal of Vocational Technical Education; Journal of Technology Studies; Society for Philosophy & Technology; Additional Important Links for Technology Education and Vocational-Industrial Ed; NC A&T Bluford Library

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Course Description

Tech 566 provides the pre-service teacher with an understanding of a variety of learning theories, instructional design approaches, teaching methods, approaches to classroom management, student evaluation techniques, addressing diversity & special needs, and media suitable in the technology education laboratory. The pre-service teacher will have the opportunity to apply concepts related to all of the above areas of study. The course also requires a **field study** in which students will intern under the direction of a cooperating public school teacher. This **field experience** will provide the student with the opportunity to observe the real classroom and laboratory for those concepts, methods and techniques that are studied in the course. While students who are currently teaching do not have to conduct a field experience, they will have to reflect on the same observation criteria as the regular field experience student. The course will also address the requirements of the North Carolina Essential Technology Skills Inventory (ETSI).

Course Objectives

As specified by the Council on Technology Teacher Education, the student will achieve in:

Knowledge

- Describing the characteristics of a group of learners.
- Communicating the rationale, objectives, structure, and intended outcomes for a technology course.
- Developing unit and lesson plans.
- Developing student assessments.

Skills

- Developing an instructional strategy for teaching problem solving through a problem solving approach in which technical content and activities are emphasized.
- Teaching through a variety of methods.
- Designing an evaluation system for a technology course.
- Designing and managing the physical environment for a technology course.
- Managing classroom behavior.
- Producing instructional media and technology.
- Reflecting on teaching

Dispositions

- Teaching value/moral issues within a technology context.
- Teaching students with diverse backgrounds and with special needs.

General Policies

Plagiarism:

If a student is caught plagiarizing any work in a report or assignment, then he or she will receive a 0 (zero) score for the assignment. Students may not copy the work of classmates or others.

Policy on Academic Honesty:

"A student who has committed an act of academic dishonesty has failed to meet a basic requirement of satisfactory academic performance. Thus, academic dishonesty is not only a basis for disciplinary action but may also affect the evaluation of the student's level of performance. Any student who commits an act of academic dishonesty is subject to disciplinary action. The procedures for disciplinary action will be in accordance with the rules and regulations of the University governing academic discipline" (North Carolina A&T State University Student Handbook).

Attendance Policy:

Each student is expected on to participate in all Discussion Board threads each week; **Discussion Board is referred to as Threaded Discussion**. Begin participating in discussion on Wednesday of each week. You must participate by Sunday night at midnight. Failure to participate in discussion will result in a zero grade for discussion that week.

With regard to other assignments, each student is expected to turn in assignments on time. Assignments turned in late (postmarked for mailed assignments) will have 11 points deducted for the first business day and 10 points deducted for each day thereafter. No work will be accepted after the last regular class meeting prior to the week of final exams (or days of final exams for summer school sessions). No work will be accepted during final exams.

Course Procedure:

This course will work in the following way.

1. Begin each week by consulting this syllabus and the course schedule below. The syllabus is located by clicking on Syllabus.
2. Complete the assigned reading.
3. Study the week's lecture notes to learn new skills and reinforce the reading. Lecture notes and related documents are located by clicking on the Course Documents button. Under Course Documents, materials are organized into weeks. Open the Week 1 folder to locate the notes and any other related files.
4. Complete the posted Discussion Board topic by responding to it by Sunday of that week. The total discussion topics for the semester are worth 15% of your course grade; be sure to participate.
5. Work on assignments not due.
6. Turn in assignments that are due. Assignments that are due **should be placed in the Digital Drop Box. Do not attach them to email and send them**.
7. Never hesitate to contact the professor via email, telephone, or mail.
8. Make sure your A&T email account is working and check it once a week. If your email account fails, then call the Aggie Help Desk and get it fixed. The professor will only use your A&T email address.

Field Experience

- **Students who are currently teaching do not have to conduct a field experience. They will have to conduct a "self-observation" instead.**
- If you are a current teacher you will download the criteria to guide your self-observations.
- Students who are Technology Education: Training and Development for Industry concentration majors, Major Codes 0279 and 0275, do not have to participate in this field experience. Your Intership In Industry courses will suffice.

Take the following description with you when you have your first visit with your cooperating teacher. Also take the attendance and evaluation forms with you that you obtained from Dr. Childress. Share all of these documents with the cooperating teacher.

- **Field Experience Description:** The students will be required to conduct a 60 hour field experience. **It must be completed by November 26.** Students who are currently teaching in the schools will **not** conduct a formal field experience but will provide a summary report on his or her own observations and experiences in his or her own laboratory and classroom. Interns need to attend at their cooperating schools on a weekly basis as agreed with the cooperating teacher. The regular field experience student will provide a summary report on his or her findings from observations and experiences during the field experience. The cooperating teacher and the professor for this course will grade the student on the field experience. The criteria for the field experience grade are provided in the field experience handbook. Attendance for the minimum 60 hours is required to pass. A satisfactory report from the cooperating teacher and the professor is required to pass Tech 566. The student must attend the field experience orientation and visit the cooperating teacher's instruction on those days and at those times that he or she arranged with the cooperating teacher. **If the student does not pass the field experience with a satisfactory, then he or she will receive a grade of incomplete (I) for the entire course.** In such a case, the field experience must be repeated the next semester.

  Field Experience Procedures: The application for field experience is due immediately after the first class meeting of Tech 566. **The field experience application is located under Course Materials in the Week 1 folder. The application is due in during the first week of class.** ***At that time, please be sure to indicate whether or not you have transportation to travel to the field experience site***. The field experience orientation, held at each school, is usually scheduled for the fourth week after the University is in session**. If the student fails to show up for orientation he or she is out of the field experience for the semester and will receive a grade of I for the semester for Tech 566.** The field experience should proceed according to instructions provided by the Assistant Dean of the School of Education but also in a manner that insures that 60 contact hours are completed in the public schools. Students will ware blue collared shirts and kackies.

  Field Experience Structure: If invited by the cooperating teacher, the student may assist the teacher with simple instructional tasks that **do not** involve safety and the sole supervision and instruction of students. If not invited to participate directly, the student will observe the teacher and class for a variety of behaviors and will make detailed notes on what they are doing. When students are invited to participate, detailed notes of what is happening in the lab must still be taken. The cooperating teacher and his or her students are being observed to identify:

  - classroom management techniques and student control

  - instructional methods that the teacher employees

  - student evaluation techniques used

  - planning tasks that the teacher uses

  - the opportunity to apply theories of learning to practice

  - opportunities in the use of media in instruction and address the ETSI

  - approaches the teacher uses to deliver content-related activities

Specific criteria for observing and reporting within the field experience are provided in class. *The field experience is not an opportunity to judge or criticize the teacher or students, and the identity of the cooperating teacher and students should be protected while making field notes and reporting findings of the experience*. (i.e.: "...the teacher and student X had a good rapport.")

1. Ideally, the intern will begin the experience by observing the cooperating teacher's instruction, lab management procedures, student control, etc.
2. After the first week, the intern should begin to assist with instructional tasks, tutoring students, and helping with clean-up and clerical tasks.
3. The intern should attend some school activities after school and outside of the regular class.
4. The intern should develop instructional materials that will support the cooperating teacher, student achievement, and the intern's own lessons that will be taught after about the first 40 hours of the experience. These materials should include educational technology products, bulletin boards, lesson plans, handouts, tests and related requirements of the ETSI.
5. The student should also get experience in working with VoCATS test bank items and the use of the relevant North Carolina curriculum guide.

Handout for cooperating teacher ends here.....

Other Assignments:

- The report on innovative teaching should be typed with a word processor that can SAVE AS MSWord 6.0 or RTF and be well written without mistakes in grammar and spelling. The report must use references that are cited in the work and listed in a reference list. The report should be no shorter than four pages and no longer than five pages excluding the cover page and reference list. The student must be able to relate the topic of the report to practice or need in technology education or vocational education. The reports should address the ETSI where appropriate.
- One unit plan and eight lesson plans will be developed based on criteria given in class. Three lessons must be about communication, three lessons must be about transportation and three about production. If the student is a pre-service vocational educator, lesson plans must relate to the trade or service area of specialization. The lesson plans must be detailed and robust. The lesson plans should incorporate the computer competencies curriculum as specified on the NCDPI Web site and as required in the ETSI. **One of your lesson plans must be focused on Diversity and one of your eight lesson plans must be focused on teaching ethics as they related to technology. You must use my format for each of the eight lesson plans.**
- A 10 minute **(maximum)** oral presentation (lecture) will be conducted and videotaped by each student, and the student will pretend that students are present in the class. Students who are currently teaching in the public schools should videotape their actual class. The concepts that have been learned in the course must be incorporated into the presentation.
- A stand-alone learning module will be developed by each student. The development of modules is important whether the pre-service teacher ends up in a new vendor-developed lab (programmed instruction) or a general technology education lab. The content and evaluation included in the module should reflect concepts learned in class. The module must be easy for middle school students to use, and it must be organized and attractive. A criteria sheet will be provided. The module should address the ETSI where possible.
- A 10 minute **(maximum)** technical demonstration will be conducted and videotaped by each student, and the student will pretend that students are present in the class. Students who are currently teaching in the public schools should videotape their actual class. The concepts that have been learned in the course must be incorporated into the presentation. The technical concepts must relate to technology education or the service area for vocational education students. The demonstration should address the ETSI where possible.
- A 10 minute **(maximum)** multimedia presentation will be conducted and videotaped by each student, and the student will pretend that students are present in the class. Students who are currently teaching in the public schools should videotape their actual class. The concepts that have been learned in the course must be incorporated into the presentation. It must incorporate good media characteristics and be on a topic related to our curricula. All three presentations will be videotaped, sent to the professor, and will be graded with provided criteria sheets. The media-based presentation must address the specific ETSI requirements related to multimedia and instruction.

- Two tests (1 safety test, 1 content test) must be developed by each student. The tests will be based on what was taught in class about evaluating student achievement and will integrate the requirements of the ETSI.
- Educational Resources Database will be compiled by the student. The preferred database is Access. You will list a variety of educational resources such as: videos, Discovery Channel schedule and Web site, educational Web sites, books, magazines and journals, etc. Additional computer competencies are required to graduate. Students who are seeking an education degree from a North Carolina university or college and who want to be recommended for a North Carolina teaching license upon graduation, need to compile a computer competencies portfolio and pass a computer competencies test (ETSI). You should **store your computer based work on a 100 MB Zip disc as a backup to your hard drive**.

Grading Policies

Grading:

• Discussion Board/Threaded Discussion	11%
• Final Exam	14%
• Midterm Exam	9%
• **Field Experience Report/Findings**	9%
• Report on Innovative Teaching	4%
• Oral Presentation	4%
• Technical Demonstration	9%
• Multimedia Presentation	9%
• Learning Module	9%
• 1 Unit Plan & 8 Lesson Plans (1 of the 8 addressing DIVERSITY and 1 of the 8 on ethics in technology)	9%
• Educational Resources Database	9%
• 1 Safety Test and 1 Content Test	4%

Grading Scale:

A = 90 - 100
B = 80 - 89
C = 70 - 79
D = 60 - 69
F = 59 and below

Advising

Advising:
Students who have **not** been assigned an advisor:

Degree-Seeking Undergraduate Technology Education or VIE Majors

Dr. Craig Rhodes: rhodesc@ncat.edu

Degree-Seeking Graduate and PBS/Provisional Technology Education or VIE Majors

Dr. Vincent W. Childress: childres@ncat.edu

Non-Degree Seeking Students

Contact your course professor.

To enroll in the masters program for Technology Education or VIE Majors

Dr. Vincent W. Childress: childres@ncat.edu

To contact the Department Chairperson
Dr. Cynthia Gillispie-Johnson: gillispc@ncat.edu

Student Teaching and Other Questions about Teacher Education Requirements:
Be mindful that undergraduate students who plan to student teach next semester must pass PraxisII for Technology Education by the end of this semester in order to be admitted to student teaching. See the links below.

Click here to learn more about Praxis II.
Click here to download Praxis II Test At A Glance for Technology Education, Test 10050
Click here for information on provisional/lateral entry in Technology Education.

If you have questions about application and testing schedules, and PraxisII exams and licensure try the School of Education's Teacher Education Web site first.

The professor reserves the right to change the contents of the syllabus during the semester.

Skills Inventory

NC Essential Technology Skills Inventory Items that apply to Tech 566

NC Essential Technology Skills Inventory Items that apply to Tech 566

5.4. Create custom layouts including columnar reports.

- Create a database layout/report utilizing various word processing skills.
- Create a database layout/report with headers and footers.
- Create a database layout to match an existing form.
- Create a database report with calculated summaries.
- Print a database.
- Print a database list/multiple records.
- Print a customized database report.

5.5. Insert database fields into word processing document

- Create a word processing document with inserted database fields.
- Print a merged word processing/database document.

5.6. Know terms such as database, field, record, layout, sort/arrange, search/select/filter, mail merge.

7.6. Be aware of online conferences relevant to professional information needs.

7.11. Use specialized email lists relevant to professional information needs.

10.1. Use the Computer Skills Curriculum to identify what students should know and be able to do

- List the appropriate Computer Skills Curriculum strands and indicators for your appropriate grade level and/or subject area

10.2. Use school television resources that support the curriculum

- List school television resources and their correlation to your appropriate grade level curriculum and computer skills competencies
- Develop lesson plans utilizing school television resources
- Develop materials for better implementation of lesson plans (worksheets, graphic organizers, activities)
- Develop an assessment tool to evaluate student learning via school television resources

10.3. Access resources for planning instruction available via telecommunications (e.g., experts, lesson plans, authentic data, curriculum materials)

- Develop a listing of URLs that correlate to your appropriate grade level curriculum and computer skills competencies

10.3. Access resources for planning instruction available via telecommunications (e.g., experts, lesson plans, authentic data, curriculum materials)

- Develop a listing of URLs that correlate to your appropriate grade level curriculum and computer skills competencies
- Correlate telecommunication resources to your Standard Course of Study instructional Objectives

10.4. Goals of the NC Computer Skills Curriculum

- Develop lesson plans to correlate computer skills with other curricular objectives
- Collect and organize available computer skills resources: DPI lesson plans, 711 SLIPS, data files, vocabulary lists, district developed materials, commercial products
- Incorporate computer skills lesson plans into classroom instruction (demonstration by videotape, principal observation, student work/portfolios, peer observation)
- Make computer skills resources available to others by distributing resources, by demonstrating skills through creation of files and additional handouts, and by discussion at staff meetings or planning sessions

10.5. The NC Computer Skills Assessment

- Utilize available released items (knowledge and performance) as assessment for computer skills for your appropriate grade level/subject
- Incorporate available test items into assessment of other instructional objectives (language arts, math, social studies, science, etc.)
- Develop additional test items for assessment of computer skills
- Develop test items involving computer skills for assessment of other instructional objectives

10.6. Locate, evaluate, and select appropriate teaching/learning resources and curriculum materials for the content area and target audience, including computer based products, videotapes and discs, local experts, primary documents and artifacts, texts, reference books, literature, and other print sources

- Develop a computer software listing for an appropriate grade/subject area
- Develop a videodisk listing for an appropriate grade/subject area
- Develop a videotape listing for an appropriate grade/subject area
- Develop a print media (texts, reference books, literature, etc.) listing for an appropriate grade/subject area

11.1. Use technology in the discipline/subject for learning and as a medium for communications

- Design curriculum learning experiences in which students use technology for word processing, database and spreadsheet activities, and for Internet access
- Facilitate student use of technology hardware/software to introduce and reinforce content topics
- Design and deliver lessons using technology resources on a selected discipline/subject
- Design and deliver a classroom activity using telecommunications

11.2. Use media and technology to present the subject so that it is comprehensible to others

- Design a multimedia project to present curriculum information

11.3. Use technology based tools that are specific to the discipline

- Use content specific technology tools such as: probe ware, midi devices, graphics tablet, graphing calculators, music, data plotters, video microscopes,

CAD/CAM systems

11.4. Use technology to facilitate teaching strategies specific to the discipline

- Utilize computers in gathering, organizing, and presenting information through cooperative learning groups
- Use Internet resources to construct classroom simulations
- Use media communication technologies in classroom presentations

12.1. Develop performance tasks that require students to (a) locate and analyze information as well as draw conclusions and (b) use a variety of media to communicate results clearly

- Utilize resources (e.g., databases; CD encyclopedias, atlases, dictionaries; spreadsheets; Internet; videodisks) for classroom instruction and/or staff development
- Develop portfolios illustrating student and/or teacher instructional demonstration or utilization of technologies such as: videodisks, VCR, computer generated graphs, multimedia programs/presentations
- Deliver electronic presentations (class/individual projects)

12.2. Use computers and other technologies effectively and appropriately to collect information on student learning using a variety of methods

- Use data collection technology such as: Instructional management systems, Instructional management assessments, electronic grade books, Technology benchmark test development, and Student management systems

12.3. Use computers and other technologies effectively and appropriately to communicate information in a variety of formats on student learning to colleagues, parents, and others

- Produce materials such as desktop publishing products (e.g., brochures, newsletters, flyers, school newspaper); mail merge form letters, electronically generated letters, and electronic progress reports
- Develop web pages to share information

12.5. Organizational and management strategies that support active student involvement, inquiry, and collaboration

- Develop technology units and lesson plans integrating technology and databases of instructional materials>
- Chart academic progress of student growth utilizing technology
- Document and prepare an organized collection of student projects/learning experiences applying technology and various learning styles

12.6. Resources available including satellite, cable, wireless, and ITFS (Instructional Television Fixed Service)

- Facilitate student learning utilizing satellite/cable, educational television, or ITFS broadcast

12.7. Select and create learning experiences that are appropriate for curriculum goals, relevant to learners, based upon principles of effective teaching and learning, incorporate the use of media and technology for teaching where appropriate, and

support learner expression in a variety of media using a variety of media communication tools

- Prepare and use integrated instructional units for the teaching of computer skills within specific subject areas
- Facilitate subject area student projects that use media and technology through the creation and/or presentation/publication stage

13.1. Use media and technology to address differences in children's learning and performance

- Use software and other technology devices such as diagnostic tools to measure student performance
- Enhance the understanding of curriculum and student learning through utilization of technology in the classroom

13.2. Use media and technology to support learning for children with special needs

- Use technologies for understanding of knowledge and skill reinforcement